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The Economic Background for 1948

WARNING that, although our expansion of exports previously has taken place in a sellers' market, many of our products are now beginning to meet competition, Sir Stafford Cripps, at a Press conference on January 7, said that hitherto we had been inclined to suppose that production was all that mattered, irrespective of costs. This had encouraged a general rise in prices and wages which could lead only to uncontrolled inflation, and ruin our trade. We must, therefore, set about reducing costs as vigorously as we could. Our manpower and production problems must be considered against the background of our external trade position. The engineering industry, although hampered by steel shortages and achieving in some classes record export figures, was making a marked contribution to increased productivity by its supplies of new equipment to home industry. The campaign for 200 million tons of coal in 1947 was almost won, and the 1947 steel target had been reached. However, as a result of increased production, transport must be one of the critical factors in 1948. The latest monthly figure for the new wagon production was 10 per cent. better than in the previous month, and over 25 per cent. better than in 1946. The repair of wagons in the middle of December was exceeding 100,000 a week compared with 88,000 a week in July, while the number of wagons unloaded had improved by 43 per cent. in the first week-end of the campaign, and by 70 per cent. in the last.

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Revised Scheme of Steel Allocation

Although increased production and export of coal was the absolute foundation of our recovery plan in 1948, steel was an equally critical problem, pointed out Sir Stafford Cripps in London on January 12. In 1948 we could use for essential purposes alone, 11½ million tons of finished steel, a figure which compared with an estimated availability of 10½ million tons. Output of the industry at its present level with existing plant, was seriously short of requirements, and we should not be able to dispense with the scheme of allocation. During 1947, the system of distribution inherited from the war period was beginning to prove inadequate; backlog had distorted the pattern of distribution, and to rectify this, and ensure that the best use is made of the limited output, the revised scheme would come fully into operation in the second quarter of this year. Some deduction from the total supply must be made to allow for steel exports, which may amount to nearly a million tons; the requirements for exports in the form of machinery, vehicles and other manufactured goods had been estimated at about a further two million tons: allowances for the latter purpose were, however, included in the total allocated to home industries. It was probable that the Ministry of Supply would be allocated rather more than the 1947 deliveries; the Ministry of Transport would receive an important addition to its 1947 figure, though some of the railway requirements were included in the Ministry of Supply figure. Sir Stafford Cripps warned, however, that the increase he had mentioned would not give us all we require, and there would be no difficulty in using an extra million tons if we could get it.

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Tratman on Track

There must be a vast number of permanent way engineers throughout the world who owed their original training to the writings of Mr. E. E. Russell Tratman, of whose death in his 85th year we have just learned. Mr. Tratman established his reputation in the U.S.A., and, probably for that reason, it is not widely known that he was an Englishman, born in Bristol, and studied engineering under a Consulting Engineer in London. He went to the U.S.A. in 1884 to take up a position on the Long Island Railroad, but his railway career lasted only two years, as he then joined the editorial staff of *Engineering News* (now *Engineering News-Record*) and retained his association with that journal until his retirement in 1932. He is best known as the author of the standard text book "Railway Track and Track Work" which appeared first in 1897 and eventually was re-written in 1926 as "Railway Track and Maintenance." This is the volume which is known throughout the world as Tratman on Track. The author had a further widespread influence on educational work, as he prepared the

texts on railway maintenance and structures for the International Correspondence Schools. We publish a brief obituary notice elsewhere in this issue.

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Steel Census Resumed

During the war a census of receipts, consumption, and stocks of steel by consumers was taken at six-monthly intervals. This was discontinued in 1945, at the termination of hostilities, but in view of the changed demand by consuming interests, and the forthcoming revision of the iron and steel distribution scheme, the Government has decided to resume the census and, as a matter of urgency, to take a census of receipts and consumption of steel during the fourth quarter of 1947, and of stocks as at December 31, 1947. It is appreciated that the return involves additional work on the part of consumers, but the importance of ensuring a proper distribution of the available supplies of steel is the overriding consideration. The return has been considerably simplified, and requires the insertion of only six figures. The opportunity has been taken to include the circular giving instructions as to the operation of the revised iron and steel distribution scheme, and to obtain information regarding the extent of direct authorisations and sub-authorisations for iron and steel.

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Tasks of the Railway Executive

In this issue we print an article entitled "Tasks of the Railway Executive." Although *The Railway Gazette* does not necessarily associate itself with all the views expressed therein, the article forms a lucid exposition of several points of view, rendered the more valuable because Mr. Lovatt Williams was formerly in the railway service. From his position in the private industrial sphere he can view the merits and demerits of the British railway system in a completely detached manner. We particularly commend that expression of opinion associated with the psychological side of creating a favourable public attitude, and the new Executive would be wise to give this an equally important place along with any technical improvements contemplated. It is a matter of ordinary business commonsense to draw rather than repel the customer, and it is a technique which requires cultivating in all Government departments.

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British Railway Equipment for Russia

The text of the Anglo-Soviet Trade & Payments Agreement,* signed in Moscow on November 27, has now been published. Under its provisions the Soviet Union will make available to this country in the eight months between February and September of this year 450,000 metric tons of barley, maize, and oats. The British Government undertakes to ensure the supply to the Soviet Union of 250,000 tons of light rails for narrow-gauge railways, and a further 10,000 of rails from any further military surpluses which may become available this year. It will also facilitate the arrangement of contracts with British firms for the supply of engineering and other equipment. Among the items specified in the schedules of Soviet requirements are 1,100 narrow-gauge locomotives, of which 75 are to be delivered in the first two years from the placing of orders, and thereafter 350 a year, and 2,400 flat wagons, delivery of which is to commence 18 months after the placing of orders at 25 a month to increase to 100 a month. Among other items required are winches, excavators, caterpillar loading cranes, tugs, dredgers, mobile diesel-electric generators, and railway steam cranes.

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Nationalised Road Transport

Announcements during the past few days have shown that the directors of some of the larger groups of road transport undertakings, both passenger and goods, have deemed it to be in the best interests of their shareholders to negotiate with the British Transport Commission for voluntary sale. The method by which such undertakings may be acquired is either (*a*) in due course by way of compulsory acquisition under Part IV of the Act, or (*b*) at any time, by agreement between the parties concerned. Transport Services Limited, of which Mr. H. C. Drayton is Chairman, has reached agreement whereby the group passes into the control of the British Transport Commission with effect from January 1 last. The directors state that the financial transaction is "fair and reasonable," in their view, although one into which they enter with regret. The Act obliges the Commission to acquire approximately 88 per cent. of the haulage interests of Transport Services Limited, spread over some 20 subsidiary companies, and this influenced the decision to transfer the whole of the haulage interests (including the headquarters organisation) in one transaction. On the passenger side, the Commission, by its acquisition of the four main-line railways, has already become possessed of interests in provincial bus companies equal to those of the big holding groups. After full consideration of all relevant factors, the directors of Thomas Tilling Limited are considering negotiations for the sale, by agreement, to the Commission of such of the company's interests as are affected by the Act. These include passenger road transport shareholdings and long-distance haulage undertakings, which would be covered by the negotiations, but the remainder of the business would be excluded.

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London Transport Achievements and Plans

A frank statement of the programme of the London Transport Executive for 1948 was given by Lord Latham at a Press conference on Monday. He said that, by reason of deferred maintenance due to war sacrifices, 1947 was the most difficult year in London Transport history, but that, despite this, the London Transport trains, buses, trolleybuses, trams, and coaches ran an all-time record of approximately 610,000,000 miles. Not only was this the highest mileage London Transport had ever achieved, but the 31,000,000 extra miles which were run last year actually represented the greatest increase ever made in a year, with the sole exception of the abnormal year of 1946, when wartime cuts were being replaced. The bus programme for 1948 provided for putting 1,200 new vehicles on the road as an instalment of the 4,000 which were on order. It was hoped that 1948 would also see the first of the 8-ft. wide buses, of which 500 were on order; these compared with 7 ft. 6 in. at present, and would allow of wider gangways and seats. The South London tramway replacement would have to wait, possibly five years, because of the slowing down of bus manufacture due to national requirements.

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London Transport Railway Plans

During the present year, the London Transport Executive hopes to be able to extend the Central Line both east and west, opening the section from Newbury Park to Hainault this summer; then extending westward to Northolt, South Ruislip, Ruislip Gardens, and West Ruislip; and, at the end of the year taking the tube trains through to Buckhurst Hill and Loughton, and instituting a shuttle service between Woodford and Hainault. Also, later in the year, the Metropolitan Line improvements should be completed, abolishing bottle necks at Harrow-on-the-Hill and Preston Road. It is then intended to increase the frequency of the Baker Street to Uxbridge service from eight to twelve trains an hour. Other railway works include an all-station broadcast system to advise staff simultaneously of delays, etc., and the use of short wave radio to facilitate communication between engineers on the job. The first of the 143 new underground cars on order are expected in July. An additional escalator will be installed at Holborn and another at Chancery Lane. The welding of rails into ¼-mile lengths has been accepted as standard for the whole system and the work will be continued throughout this year.

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Steel Wagon Production, North-Eastern Region

When the need for conserving timber arose during the war, previous experience on the L.N.E.R. in the construction of steel wagons placed the company in a favourable position to extend this policy further, and at the present time, with the need for wagons growing more urgent, some importance attaches to the installation at Shildon of plant capable of turning out 13-ton wagons for general merchandise traffic at a rate of 80 a day. Except for the floor, which is of wood, this wagon

* Cmd. 7297. H.M. Stationery Office. 3d. net

is made entirely of steel. Building is carried out in three stages, which are described elsewhere in this issue, and a sequence has been worked out to enable the building to be completed in the shortest possible time, and to effect a reduction in the time required in handling component parts. The body of the wagon is built entirely independently of the frame, and the number of riveted parts has been reduced to a minimum. The two ends are each formed from one sheet, and the end and door stanchions, with the top rail, are secured to the body by welding. The floor boards, instead of being individually fastened, are fitted into guides formed by a channel section at each side, passing the full length of the wagon.

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Railway Earnings in 1947

THE latest return of traffic receipts issued in respect of the four main-line railway companies and the London Passenger Transport Board relates to the four weeks ended December 28, and in effect, therefore, covers the year 1947, the last year of railway operation under private enterprise. As had been expected, the year ended with a substantial decline in gross revenue, and there can be no doubt that when the full results are made known the fall in net revenue will be considerably more. This is despite the increases in rates and charges which have taken place during last year, and is a reflection of the heavy advances in the cost of wages, coal, materials, and so forth.

For the four weeks to December 28 the total traffic receipts amounted to £28,827,000, an increase of £4,121,000 as compared with 1946, and, as will be seen from the table below, there were advances in each category of traffic. Taking the year as a whole, however, receipts at £350,403,000 were lower by £5,364,000 despite the overall improvement of £6,578,000 at £56,823,000 in gross revenue from the movement of coal and coke. Details of the receipts for the four weeks, and also for the year in comparison with the corresponding similar period of 1946 are shown hereunder:—

FOUR WEEKS ENDED DECEMBER 28, 1947

	1947 £000	1946 £000	+ or − £000	Per cent. + or −
Passenger	15,263	14,059	+1,204	+ 8·6
Merchandise	8,701	7,003	+1,698	+24·2
Coal & coke	4,863	3,644	+1,219	+33·4
Total	28,827	24,706	+4,121	+16·7

AGGREGATE FOR 52 WEEKS

	1947 £000	1946 £000	+ or − £000	Per cent. + or −
Passenger	194,841	201,200	−6,359	− 3·2
Merchandise	98,739	104,322	−5,583	− 5·3
Coal & coke	56,823	50,245	+6,578	+13·1
Total	350,403	355,767	−5,364	− 1·5

The manner in which home railway traffic receipts fluctuated during 1947, as compared with the corresponding periods of 1946, is shown in the table below:—

(000's omitted)

Four weeks to	Passengers £	Merchandise £	Coal £	Total £
Jan. 26	−1,085	− 509	+ 495	−1,099
Feb. 23	−1,636	−2,593	+ 206	−4,023
Mar. 23	−1,104	−3,162	+ 299	−3,967
Apr. 20	− 573	−1,167	+ 289	−1,451
May 18	− 807	− 173	+ 714	− 266
June 15	− 204	− 190	+ 501	+ 107
July 13	− 782	− 447	+ 167	−1,062
Aug. 10	− 980	− 769	− 1	−1,750
Sept. 7	− 659	− 722	+ 40	−1,341
Oct. 5	− 708	− 377	+ 162	− 923
Nov. 2	+ 452	+1,283	+1,228	+2,963
Nov. 30	+ 523	+1,545	+1,259	+3,327
Dec. 28	+1,204	+1,698	+1,219	+4,121
52 weeks, 1947 ...	−6,359	−5,583	+6,578	−5,364

From this it will be seen that there has been a steadily improving tendency in gross receipts since August last, and although the major part of the improvement obviously is due to the increase in fares and charges which came into operation on October 1, the fact that it began before that date suggests that the heavy decline in the volume of traffic, which had been taking place as a result of the shrinkage of the wartime figures, had been checked.

The traffic statistics now available are the last to be returned by the railway companies as such. In future their compilation and issue will be the responsibility of the British Transport Commission. Net revenue figures relating to the railways will not be known until the Government issues its White Paper, probably in about two months time, showing the receipts and expenditure of the pool arrangement under which the railways have worked since control was imposed at the outbreak of war. There is no doubt that the revenue of the pool for 1947 will be considerably less than the £43,000,000 fixed under the control agreement as the annual sum payable by the Government to the railways.

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Southern Electric All-Steel Suburban Stock

AS far back as the early years of the present century, when the question of electrifying the Great Eastern Railway was under discussion, the opinion was put forward that the problem of providing sufficient seating capacity for passengers during rush-hour traffic on suburban lines never would be solved. However depressing such suggestions may have seemed to those who were then grappling with the problem, it must be admitted that the gloomy prophecy was amply fulfilled during the ensuing 45 years, and the solution is as remote as ever.

Resignation to the impossibility of providing seats for all suburban passengers during peak periods was also evidenced by the Southern Railway in the design of its latest all-steel suburban electric stock. This is not to say, however, that a supine attitude to the problem was in evidence; on the contrary, a valiant effort has been made to do everything possible to ease the discomforts of overcrowding. As a result, we have the all-steel six-a-side suburban stock (illustrated in our issue of May 4, 1946) which was described in detail by Mr. L. Lynes and Mr. C. A. Shepherd in their paper before the Institution of Locomotive Engineers in London on January 14.

Some 300 steel coaches have been built at Lancing and Eastleigh during the last two years, following generally a prototype four-coach unit built to Mr. O. V. Bulleid's designs as early as 1941; in the latter, however, the coaches had timber roofs. Most of these 300 vehicles are of the compartment type for suburban traffic, and it was thus natural to follow their general constructional principles when building the ten four-coach units which form the subject matter of the paper.

Of the four coaches in each unit, one is of the ordinary compartment type, while in the others the compartments are traversed by a vestibule which, though it reduces slightly the number of seats which otherwise could be included, goes some way towards providing a space where passengers can stand with minimum discomfort. The stock is 9 ft. wide, and the bodies are 62½ ft. long.

The authors confine themselves to the design and construction of these units from the viewpoint of the railway carriage designer and constructional engineer. Apart from an appendix —added later—practically nothing is told us in the body of the paper about the electrical equipment, except the weight of the traction motors—3 tons 12 cwt.—which leads the authors presently into a short but extremely interesting digression on the riding of the motor and trailer bogies, a topic which was discussed recently at some length in our correspondence pages. After a somewhat brief description of the bogies, buffing gear, and underframes, the paper is given up entirely to an account of the carriage bodies and of the special methods developed for their construction. The authors seem happiest in this part of the paper, and have gone to a good deal of trouble to select diagrams and photographs to supplement the descriptive paragraphs.

One of the most striking effects of the introduction of so much steel into carriage building was the large amount of negotiation between the management and the local representatives of the various trade unions which this change entailed. The eventual result was that fitters and sheet metal workers assembled such items as doors, compartment quarters, ends, and roof sections in the assembly jigs; and body makers undertook the complete assembly, such as roofs, floors, sides, and nose ends. In addition, the erection of welded sections on to the underframes became the work of body makers; as also did the hanging of doors. The authors state that this arrangement has resulted in smooth and efficient working, and pay tribute to the way in which skilled woodworkers quickly adapted themselves to the erection of steelwork.

Since steel body shells represented an entirely new venture for Eastleigh, the staff was at liberty to develop the most

satisfactory methods of construction free from the influence of existing facilities. Production lines were planned accordingly for the mass-assembly of main items (roofs, side quarters, and ends) which previously had been fabricated on large and elaborate jigs. At first, four units a week was the target, but owing to an urgent demand for production to be increased to six coaches a week, some additional stages were introduced into the various operations. Roof racks were, therefore, arranged after the roof jigs and were used to provide a convenient stage for fitting the ventilators and carrying out the electrical wiring in the roof. An electric capstan moves the coaches through their first seven stages on the production lines, and the main works traverser takes them through stages 8-13, after which the seat cushions are added and brake testing and final inspection takes place. The devising of this production scheme reflects great credit on the staff concerned, in view of its compactness and flexibility. No attempt is made to compare the costs of construction of all-steel stock with those of timber-built electric stock.

The paper is likely to be remembered and referred to in the future chiefly as a straightforward account of a competent mass-production method of railway carriage construction, applied to highly specialised types of vehicles, under difficult labour conditions. The layout of the works at Eastleigh imposed further limitations. It is interesting to compare the present paper with Sir William Stanier's masterly description of the mass-assembly of railway coaching stock, which he presented to the Institution of Mechanical Engineers (Proc. I.Mech.E., 1939, vol. 142, p. 13) at a time when many of the difficulties with which Mr. Lynes and Mr. Shepherd had to contend were quite unknown.

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Railway Historical Records

AMONG the minor matters engaging the attention of the British Transport Commission is the importance of the most extensive and fundamental collection in the world of railway archives and relics, with which the Commission has become vested by reason of its acquisition of the ownership of the British railways. At such periods of reorganisation, documents and relics of industrial, economic, historical, and educational importance are most liable to become dispersed, lost, or destroyed, and attention to this matter was drawn in a letter to *The Times* over the signatures of Lord Greene (President of the British Records Association and Chairman of the Historical Manuscripts Commission), the Director of the Science Museum, and presidents of a number of important bodies. This resulted in an immediate response from Sir Cyril Hurcomb stating that the matter is one which has already been the subject of much thought by the British Transport Commission, and that steps have already been taken to compile schedules of the documents and relics. Consideration is now being given to the form in which appropriate collections of the material which merits preservation by reason of its historical or technical interest and importance may be made in convenient centres, where it is hoped they will become available for public inspection.

For more than half a century the matters of storage, classification, and display of such material have been discussed from time to time, without any far-reaching results, and as long ago as 1896 a National Railway Museum Committee was in existence, but dispersed its energies largely in personal differences among its members. In part, the failure to achieve results, both then and subsequently, may have been the outcome of the formulation of grandiose and costly schemes for a National Museum and Library, without sufficient reference to financing the establishment and maintenance of such an institution.

When the Standing Commission of Museums & Galleries was constituted in March, 1931, a comprehensive memorandum was prepared advocating at least the preparation of a catalogue of transport items for the whole country. This was accepted in principle, but the industrial depression of the time made even the comparatively modest cost then impracticable. This memorandum showed considerable realism in pointing out that a National Central Museum was impracticable, by reason of the fact that so many valuable exhibits were already in the possession of local museums and galleries, public libraries, and semi-public collections, throughout the country. The records of the great technical institutions and of the societies devoted particularly to the study of some aspect of transport, constitute no inconsiderable proportion of the records and relics of our great national transport heritage. With the total relevant material thus in the hands of many bodies and persons, both public and private, the task cannot devolve exclusively upon the British Transport Commission.

Heretofore, many of the actual achievements in preserving specific objects or groups of records have been the result of local effort, inspired by local pride and enthusiasm. Moreover, large objects such as locomotives and carriages can be accommodated and appreciated more readily in stations (for example) than grouped in museum buildings. A policy of co-ordinated decentralisation would appear to offer the greatest chance of success, particularly bearing in mind the shortages of labour and material that are likely to last for some years.

Already, there is a nucleus of such an organisation in the collections in the Science Museum in London, the Railway Museum in York, and the collections in Liverpool. It may be that a series of local museums will prove the most satisfactory method, and Sir Cyril Hurcomb's reference to convenient centres indicates that such a course is already in mind. The York Railway Museum provides an admirable example. It had its origin at a meeting held at the headquarters of the old North Eastern Railway on March 29, 1922, when the efforts that had been made departmentally to preserve interesting railway relics were considered. It was agreed that an all-line scheme should be evolved. The interesting collection subsequently assembled, which was by no means confined to the L.N.E.R. and its predecessors, was dispersed for safety during the recent war, but was reassembled last year, and the museum re-opened by Sir Ronald Matthews on July 18. The present arrangement of the museum is shown in the drawings on page 74. In addition, there are famous locomotives (not all in railway ownership) publicly preserved in such widely separated places as Darlington, Newcastle, Glasgow, Barrow, Liverpool, Canterbury, and Newton Abbot.

Sir Cyril Hurcomb has expressed the willingness of the British Transport Commission at all times to consult with other bodies interested in the matter, and it is to be hoped that a fully-representative National Committee will be formed with the aid of the great technical institutions, and all those societies which specialise in some branch of the study of transport, engineering, and technological history.

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Praise for the Midland Railway

THE following letter from Mr. Roger Fulford, Barbon, Carnforth, appeared in *The Manchester Guardian* of January 10:—

In his interesting article on British railways in *The Manchester Guardian* of December 31, your special correspondent is to my mind too generous towards those responsible for the management of the railways during the past 25 years. He no doubt felt that their extinction by the State was an occasion for bouquets rather than for dead cats. None the less the decline of the railways in the hands of the four great companies has been melancholy and spectacular. I question if anyone who has not made a study of timetables has any conception how catastrophic that decline has been.

In 1901 it was possible for a traveller to choose one of ten express trains from St. Pancras to Scotland. Today there are four. In 1901 the 9.30 a.m. reached Carlisle at 3.45 p.m. Today the 9.40 arrives at 4.50. In 1901 the journey from St. Pancras to Manchester took 3 hours 50 minutes; today the same journey takes 4 hours 35 minutes. Professional publicists have put forward many excuses and explanations, but the facts are not changed by their exertions. These figures—and many like them from all four railway companies—are inescapable and damning. My own examples are all taken from the old Midland Railway, the pride of the English railway system before the first world war, whose character and initiative were butchered by the L.M.S.

Today the British railways pass from private to public ownership. It would perhaps be more correct to say that they cease to be the playthings of monopoly capitalism and become the playthings of State capitalism. The change invites neither alarm nor enthusiasm—but only indifference. The choice of members of the new Railway Board shows the extreme reluc-

tance of the Labour Government—like an overcautious witch—to trust its fortunes to a new broom.

Apart from the pressing problem of replacements, three tasks await those responsible for British railways. The first is to deal with the hoary question of road competition. The second is decentralisation. (The remarkable progress of the Midland Railway from 1890 to 1914 was in large measure due to having its headquarters at Derby. The company resolutely refused to be run from London. In consequence people in the Midlands and North got what they wanted.) The third is to give a far larger share of control and management to the railwaymen themselves.

Tasks of the Railway Executive

By T. Lovatt Williams

THE general consensus of informed opinion is that the new Railway Executive has before it a gigantic job. *The Railway Gazette* has referred to it as a super-human one, and the many critics of the British railway system will undoubtedly compare it to that undertaken by Hercules in the cleansing of the Augean stables. In whatever terms one thinks of it, there is certainly a team of men well able to cope with the magnitude and diversity of the problems before it.

When the storms surrounding the Act of Parliament had passed away and the Minister's appointments were seen to be of the type that induces confidence, then it became possible to perceive an atmosphere akin to that of watching the opponent's batsmen take the field; subdued applause and a sporting interest in what they will accomplish. Such is the atmosphere which exists in relation to the British railway system.

The old directors have gone—seventy of them in total—industrialists, bankers, landowners, peers, and in their place there is a small body of men expert in railway or other organisations. Not only will they carry the load of daily decisions at a high level, which in itself is practically a full-time job, but they will be forced to use every atom of imagination and initiative if the railway system is to be pulled out of the groove where it has remained far too long. The public is expecting great things. Will it, within a reasonable space of years, see the policy of nationalisation bear fruit? Will it find the British railway system leading the world in technical achievement, as once it did, or will it, most humiliatingly, tag along behind other nations in progress and reputation? An opportunity has been given to this Executive such as has never been afforded any organisation in the history of British railways. How will it be used?

To indicate the many desirable reforms—many long overdue—would form an extensive work far beyond the confines of one short article, but there are several items which should stand high in the list of priorities. Emphasis must also be laid on the fact that there is a Government edict against capital expenditure for a space of five years, and this will certainly handicap the work of the Executive and prevent many worthy schemes being carried out.

The matter which should probably be first among the operations of the Railway Executive is a peculiarly intangible one, but nevertheless of very great importance. It involves the technique of converting the public from "anti-railway" to "pro-railway." Until this is done the new controllers will find themselves battling for years, and at every turn, with a pubic opinion, informed or uninformed, which is critical of railways and all their ways, and this is too big a handicap to despise.

At present the public is definitely "anti-railway," and there is good reason for it. Only a small proportion of trains run to time, the booking halls and waiting rooms are dingy and depressing, the tea and food served in the buffets is scandalous, and the cross-country journeys are practically the same as in 1923. The average railway passenger does not travel because he likes it; he travels because he must, and so travelling by train tends to become one long grouse.

This is the atmosphere which has grown up over the years, and this it is which the Executive will have to tackle at an early stage, if it is to gain the goodwill of the public which, after all, pays the fares and the taxes by which the railway will subsist. How it will be accomplished is a matter for experts in publicity values *plus* definite alterations and amendments to the present method of treating passengers as if they were so many bodies without minds.

As soon as the railway passenger finds that the Executive is beginning to do something for him a subtle change will take place. He may discover that booking halls begin to have a more receptive appearance, some good lighting, a splash of colour, perhaps some warmth. He may wake up to find that refreshment rooms are selling drinkable tea in cups with saucers and that no longer is one dirty communal spoon chained to the counter. Perhaps the most convincing fact of all would be the knowledge that at long last the cross-country runs were having attention, with the possibility of diesel coaches, brisker timings, and connecting services.

These three items only, if seriously and efficiently tackled, would be sufficient to turn public opinion in favour of the railways. The passenger does not ask for a revolution; he requires but a proof that in the Olympian Heights of Marylebone there is some stirring to give the long-suffering passengers a better time. The first two points could be rapidly met, the third would take effort, imagination, and some years. The antiquated idea that the passenger does not matter very much must be abandoned. The passenger now is not only the fare-payer; he is the taxpayer, and as such can call the tune.

The British public has been seriously disturbed by the number of accidents which have occurred recently. Compared with the monthly figures of road accidents, the rail casualties are indeed a small proportion, but the railways had become trusted for their splendid record of safe travel. What has surprised people, however, is the fact that of the four railways existent between 1923 and 1947, only one, namely the G.W.R., has equipped itself with automatic train control. This notwithstanding repeated observations by the inspecting officers of the Ministry of Transport as to the desirability of such installation and the fact that large sums have been spent in research. Thus the Railway Executive will now have the opportunity of dictating a common policy of A.T.C. for all the system and will at an early stage remove the anomaly of the Western Region being fitted with one type while the London Midland Region is on the point of installing another.

This tendency to divergent and unco-ordinated practices has persisted too long in every technical department of the railway companies, and not more so than in the case of locomotive design and construction. In the past it seems to have been a point of honour with each new Chief Mechanical Engineer to bring out a new type of engine, each successive creation tending to multiply the jigs and tools and processes on the one hand and the stores stocks on the other hand. Although the number of classes has been reduced over the past ten years or so there is a great opportunity for the standardisation of types and, what is equally important, of components. The same line of reasoning applies to rolling stock in general, and the field for economies is practically unlimited.

The other item which is of such vast importance in these critical days is the question of wagon building and repairs, for much of the national effort depends on the supply of railway wagons. Although shortage of materials is a factor handicapping the return to normality it will generally be conceded that the methods of repair of wagons are badly in need of expert scrutiny and reorganisation. There are traditional methods of repairing railway wagons which have persisted for several decades, and the application of modern principles of progressive systems and a re-siting of works and depots is certainly indicated. This is one of those instances where it would pay the Executive to appoint a Commission—so important is this question—and to co-opt the services of one or two top-rank experts in production methods who would be independent of the traditions and bias of railway service.

The foregoing suggestions therefore represent a very few of the modes of approach to improved conditions, but they are all extremely important, as will readily be recognised. It can also be foreseen that under the impetus of nationalisation as directed by a capable Commission and Executive the old traditional team spirit of all railway workers will be strengthened greatly and the former high sense of discipline will return. There is no reason to doubt that British Railways will recapture their position as the best in the world, but it will only be achieved by the use of advanced ideas and the courage to adopt them.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

New Third Class Sleeping Cars

Cambridge. January 12

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—An editorial in your issue of January 9 reports that the first of six new third class sleeping cars was completed by the L.N.E.R. before the end of 1947. The Transport Commission and Railway Executive will make a strange start to their business of unifying the railways if they put this vehicle into traffic. They are restricted to the building of 1,000 passenger coaches this year and should aim at providing the greatest number of seats for their long-suffering passengers.

If the six sleeping cars are built, they will carry only 96 people and make but one journey a day. Six ordinary third class coaches will carry nearly four times as many passengers and make two trips a day between, say, London and Newcastle. In a letter, which you were good enough to print on September 26, 1947, I pointed out that sleeping car charges are not on a commercial basis and should be revised. The position should not be complicated by experimenting with an odd luxury third class sleeping car during the present state of transition through which the railways are passing.

Yours faithfully,

EAST ANGLIAN

Preservation of Railway Relics

32, Russell Road,
London, W.14. December 27, 1947

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In taking administrative charge of British Railways on January 1, 1948, the Railway Executive will have come into possession of many items of railway equipment, drawings, and records which are of unique historical value. It is much to be hoped that the responsible officers will see that due care is exercised in deciding what ought to be preserved, for the fate of many irreplaceable items will be placed in their hands.

An important example of this exists in the veteran passenger locomotive, No. 20002 (old No. 2), of the L.M.S.R., which was built in 1866 and was in continuous service until a few weeks ago. The engine is now standing at Derby, its fate uncertain.

Through the Stephenson Locomotive Society, successful efforts were made to persuade the L.M.S.R. authorities to postpone the breaking up of this very notable machine; but as the engine has passed now into State ownership, the society would like to know the feeling of the Railway Executive about the preservation of certain historical items of which this engine is so fine an example.

The L.M.S.R. was, indeed, willing to sell the engine at its scrap value to the Stephenson Locomotive Society. The society, however, is not interested in the mere acquisition of historic locomotives as such; but it is intensely interested in their preservation and permanent exhibition so that their full significance, in the trend of engineering thought and in the constructional style of their day, can be appreciated by the public. The society, which is the senior body in this country for the encouragement of an appreciation of railway locomotive history, would be glad to give any help within its power to the Railway Executive in the future, so that the preservation of unique railway relics can be realised.

The time is now fully ripe for the establishment of a national railway museum. An excellent lead in this direction was given by the L.N.E.R. in founding its museum at York, though this naturally has a preponderance of objects from that line; in any case, the accommodation there is practically filled. In view of the possibility of many items of present railway equipment being discarded through change of ownership, a chance—which will never come again—of preserving them for posterity presents itself. Is it too much to hope that in the country which gave railways to the world, a due appreciation of their unparalleled historical worth could be expressed in the establishment of a *national* collection?

J. M. MASKELYNE,
President, Stephenson Locomotive Society
W. O. SKEAT, M.I.LOCO.E.

[See editorial article on page 68.—ED., *R.G.*]

Railway Nomenclature under Nationalisation

Watford. January 5

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I do not know why it was decided to introduce the unnecessarily cumbersome name, "London Midland," for one of the new regions when the other main-line regions do not include the name "London," and I suggest that it should be popularised as "Midland" as an everyday colloquial and journalistic name. This may happen anyway, of course, just as we used to talk of the "North Western" in the old L.N.W.R. days prior to 1923 (and similarly the "South Western" for the L.S.W.R.); but anything done in this direction in the railway press would help.

I also suggest that publicity might be given to the idea of changing the name of the "third" class to "second" class and getting rid of the present anomaly of "first" and "third." It is true that there is still a "second" on a few boat trains, but this would remain merely as it is, and a "third" class be added in the few trains where it is necessary for the purpose of through bookings to the Continent.

Yours faithfully,

B. LONG

Railway Network Principles Barred to B.T.C.

c/o Cotterell & Co.,
110, Dale End,
Birmingham, 4. January 6

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—You have in times past dealt with the distinctive railway network principles which I have originated, and with the schemes based on them. You also once gave a very good account of my project for a Grand Contour Canal. This is just to let you know that I have now positively notified the British Transport Commission that all these principles and projects are barred to them, and are strictly reserved to private enterprise.

I just cannot get the idea that in this, the country of the origination of railways, the private individual should be totally, rigidly, and for ever excluded from the railway field.

Yours faithfully,

J. F. POWNALL

[The B. T. C. will be perturbed !—ED., *R.G.*]

Publications Received

Home Rails Preferred. By Emett of "Punch." London: Faber & Faber Limited, 24, Russell Square. 10 in. × 7¼ in. Price 10s. 6d.—Emett's conception of British railways makes them look like the poor bag of physical assets of which much has been heard in the past, although doubtless less will be heard in the future. His drawings, however, are without the malice implicit in that phrase, and there may be some who find it easier to feel affection for his incongruities than for the "streamline Socialist measures" so confidently propounded as a solution of our difficulties a short time ago. Emett introduces his drawings with a poem, "Farmer's Train," inspired by the Kent & East Sussex Railway before it came under the wing of the Railway Executive. It is the individualism of that line that is reflected in his own railway, with its now famous locomotive, *Nellie*, its carriages of curious cut, and its distinctive personnel. Emett's railway, however, remains a law unto itself, and his admirers will hope that it long continues to do so.

The Trains We Loved. By C. Hamilton Ellis. London: George Allen & Unwin Limited, Ruskin House, 40, Museum Street, W.C.1. 9½ in. × 6 in. 196 pp. Illustrated. Price 15s.—The author has made an admirable and successful effort to combine an appeal to the general reader with the technical accuracy required by the railway enthusiast. Our earliest recollections of railway travel are probably happy ones, because the journey was the first stage of the holiday, and this book recaptures the memories of what our railways were like in the more colourful days of the Edwardian era, and also in the 1870s. Thus, there is ample material for gratifying the nostalgia of three generations, and we have no hesitation in commending the text, the very numerous half-tone illustrations, and the eight colour-plates from original paintings by the author, as combining to constitute an attractive book.

The Euston and Crewe Companion. By D. S. Barrie. South Godstone, Surrey: The Oakwood Press, Tanglewood. 7½ in. × 5 in. 42 pp. + 4 folding plates and 8 illustration plates. Paper covers. Price 4s. 6d. net.—This booklet bears all the marks of having been written by the ideal author, in as much as it combines the accuracy of the professional railwayman with a knowledge of the requirements of the traveller, presented in the easy style of the experienced writer. As the title indicates, it is essentially a companion for the journey, designed to be read in the train, and not at home. Nevertheless, it has many valuable reference features, such as track plans and gradient profiles (on four folding plates); lists of opening dates; and bibliography. The illustrations are interesting and well chosen.

The Scrap Heap

STATE CONTROL

My son, aged 12, went to Kings Cross Station to collect engine numbers.

A railway policeman turned him away, explaining, "This is not the L.N.E.R. now."

Mr. T. C. S. Linaker, in a letter in the "Sunday Express."

* * *

REGIONS !

The question of nomenclature in our State-transport outfit seems to have been bungled, like many other things that we have seen already or must unfortunately expect. What *are* these "regions" to be called? Shall we see, at Paddington (Praed Street): "Way Out, and to Western Region"? Already we hear that the *Southern Railway Magazine* is to be the *Southern Regional Magazine*.

What sort of damfoolery is this? What is a region? It may be a large or small area of the globe; it may be a division of a country for purposes of defence and war effort. But if there is one thing on God's earth that cannot be a region, it is a railway which is measured in miles, not acreage. The various titles of the Indian State Railways have formed, in the past, some of the few good points of those ponderous organisations. At least there was not a Bombay, Baroda and Central India *Region*. A murrain on the authors of such absurdities!—*Mr. C. Hamilton Ellis in a letter in "Modern Transport."*

* * *

THE BENEFITS OF NATIONALISATION

A railway correspondent writes:—

In a certain railway office the order had gone forth that as from January 1 the heading on all railway stationery had to be altered in accordance with the new national nomenclature. The order was interpreted perhaps too literally by a well-meaning but somewhat ingenuous typist, who, in her zeal to consolidate the gift of nationalisation, decided that the term "domestic" must include those rolls of tissue paper provided for our daily use (and which bear on each leaf the name of the owning company), and most conscientiously proceeded to overtype the new heading on each sheet.

The poor typist had nearly completed a whole roll, and was beginning to think rather unkindly about nationalisation, before the supervisor discovered what she was up to, and persuaded her that the amendment was not really necessary. The typist's reply was that she was so glad, as she was getting all *behind* with her work!

* * *

* * *

100 YEARS AGO

From THE RAILWAY TIMES, *Jan.* 15, 1848

RAILWAY ACCIDENTS.—The practicability of our "MEANS of COMMUNICATION between the GUARDS (or PASSENGERS) and ENGINE-DRIVER," as well as our ELECTRIC TELEGRAPH and Arrangements, may be seen by applying to BRETT and LITTLE, Furnival's-inn, London.

PARIS and LYONS RAILWAY.—DEPOSIT of SHARES.—The Board of Directors beg to inform the shareholders that, according with the resolution of the 18th December last, Certificates of Shares may be deposited in the offices of the Company on and after the 18th instant. They will then receive a nominative certificate of deposit, with the number of their shares inscribed thereon, signed by two Directors, and stamped with the Company's stamp. Notice is hereby given to such shareholders who have not withdrawn their definitive certificates in exchange for those deposited for the payment of the third call, that they are requested to do so before the 31st instant. After that delay, the certificates which are not withdrawn will be deposited in the offices of the Company, and subject to the expenses of a regular deposit.

Paris, 9th of January, 1848

Apply in London at Messrs. Devaux and Co., 62, King William-street.

The benefits of nationalisation—see paragraph above

Railway Progress

A pre-nationalisation poster

* * *

NATIONALISATION OF RAILWAYS

Four letters to "The Times"

Now that the railways have been nationalised is one entitled to hope that railway property—that is, public property—will no longer be defaced with commercial advertising, not only on bridges, embankments, and in stations, but in the carriages of the Underground as well?—Robert Lutyens.

May I seek guidance of the P.R.O. of the Minister of Transport through your columns? Will passengers with luggage be expected to tip railway porters now? I cannot recall any other kind of public servant whom it is customary to tip.—Spinster.

With reference to the query by "Spinster," I wonder whether she is aware that in Switzerland, where almost all the railways have been nationalised for many years, porters not only demand their remuneration according to a fixed tariff, but have to be tipped on top of it.—W. Zehnder.

Mr. Robert Lutyens surely takes a very arbitrary view in demanding the removal of all advertisements from railway property, including the interior of Underground carriages? First, not all the public may agree with the view that these advertisements constitute a "defacement." Quite apart from that issue, however, the advertisements in question contribute considerable revenue. Does Mr. Lutyens think the majority of the public would be prepared to pay higher fares for the doubtful pleasure of having the advertisements removed?

If Mr. Lutyens carries his argument to its logical conclusion, he would no doubt like to see all advertisements removed from *The Times* newspaper. I do not know by how much such a removal would increase the selling price of *The Times*, but I have no doubt it would place your unique journal beyond the means of many who at present enjoy it, quite apart from denying them the public service rendered by the high-class advertising you publish. But perhaps this would be Mr. Lutyens's idea of progress.—F. J. Lyons.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

CANADA

C.P.R. Chairman's Review of 1947

Mr. W. M. Neal, Chairman & President of the C.P.R., said in his annual statement that during 1947 the company placed orders for equipment worth $47 million, with particular emphasis on wagons and locomotives to expedite the movement of Canadian products for export. Grain traffic had been given a priority, and with over 800 vans a day moving eastward, the quota of loadings set by the Canadian Wheat Board had been exceeded steadily.

Other long-range improvement plans included in the above expenditure were extensions in the use of diesel locomotives, and in automatic block signalling. Diesels were already in wide use for shunting, and tests were being made of their adaptability to main-line traffic. New rolling stock ordered during the year included 3,250 steel-sheathed box vans for grain, flour, and paper traffic; and 1,750 other wagons.

Canadian Pacific Air Lines, an important passenger and cargo-carrying subsidiary, covered nearly 5,500 miles of licensed routes, mostly into Northern Canada, linking regions formerly difficult of access.

The last of the four new "Beaver" cargo ships, ordered to replace a unit that was a complete war loss, entered service in the autumn. The restoration of high-class passenger service on the Atlantic was made by the *Empress of Canada*, to be followed this summer by the *Empress of France*. An ex-German ship was purchased and renamed the *Beaverbrae*, and would be in service early in 1948 to carry immigrants. Of future shipbuilding, Mr. Neal said the company's plans included new passenger liners to be built when construction costs reached a level that would permit building on a sound basis.

UNITED STATES

Level Crossing Elimination at Louisville

At Louisville, Kentucky, the Louisville & Nashville Railroad runs for several miles parallel to and on a level with Frankfort Avenue. As a result, the city authorities have prepared a project for the elimination of the 18 level crossings involved, at an estimated cost of about £2,250,000. For financing its share of this sum, the city has in hand £1,250,000 raised by the issue of bonds in 1944. During the past five years 10 people have been killed at these level crossings.

Railways' Entitlement to Air Powers

Mr. R. V. Fletcher, Special Counsel, Association of American Railroads, recently told the President's Air Policy Commission that there is no sound reason for denying the railways the privilege of engaging in air operations. Mr. Fletcher contended that it was grossly unfair and contrary to the American system of free competitive enterprise to reject arbitrarily all railway claims to enter the air field simply because they were large surface carriers.

The railways were "making no war on air-line operation and development," but they were protesting against continuation of a policy of wholesale subsidisation of the air carriers out of funds to which the railways themselves were large contributors.

"To bring about fairness in the competitive struggle," Mr. Fletcher continued, "each form of transport must stand on its own feet, with no help from the public purse. If a particular form of transport cannot survive without Government subsidies, there is obviously something wrong with its management or its endeavours. The air industry is more than 20 years old. It has attained the stature of a giant. Its days of being pampered and coddled should be terminated. If it cannot now stand alone it probably never will. It should be made to pay its own way by meeting its own operating expenses, maintaining its air ways, paying proper rentals for Government-constructed airfields and facilities, carrying on its own research and safety-producing projects, just as do the railroads and the pipelines."

ARGENTINA

Partial Strike on Private Railways

On November 21 and 23, the Buenos Aires suburban services of the privately-owned lines were paralysed by a lightning strike organised by the Temperley (B.A.G.S.) and Buenos Aires (B.A.W.) sections of the Railwaymen's Union (see also *The Railway Gazette* of November 28). The declared object was to strike for 24 hr. and work for 24 hr. alternately, until the authorities met their demands. These were, briefly, a minimum wage of ps. 300 for labourers and ps. 350 for other grades, together with increased opportunities for promotion.

The strike was organised by employees of the Traffic and Way & Works departments of the two railways mentioned, but was supported by those of the other privately-owned railways. It was disowned by the Central Committee of the Railwaymen's Union, which expelled several members as undesirable agitators; and also by the Secretariat of Labour & Welfare, both stating that the origin of the movement was to be found more in political motives than any other. In spite of this, the strike received increasing support and spread to up-country centres such as Rosario, threatening to halt main-line transport throughout the country.

On November 24, the men were promised by the Secretary for Labour & Welfare, Sr. J. M. Freire, that their demands would be considered urgently if they returned to work at once, and the movement thereupon terminated as suddenly as it began, the stoppage called for November 25 being cancelled. The Enginemen's Union did not take any active part; and the C.G.T. (General Workers' Confederation) issued a manifesto condemning unreasonable strikes. The State Railways were not affected in any way.

The Central Committee of the Railwaymen's Union, in order to justify its position by emphasising its efforts on behalf of its members, announced that the increases in salaries and wages, and other improvements, made necessary by the application of the State Railways wage agreement to the privately-owned lines (see *The Railway Gazette* of November 28), will cost some ps. 400 million a year; further increases at present under consideration will raise this figure to ps. 543 million: and fresh proposals yet to be made, involving a minimum wage of ps. 280 to ps. 320 for labourers, will bring the total cost to ps. 700 million a year. It may be assumed safely that rates shortly will have to be increased very steeply in order that the railways may be in a position to carry such staggering burdens.

INDIA & PAKISTAN

Refugee Train Derailed

About 166 persons were killed and 115 injured at Shambhu, 11 miles north of Ambala Cantonment, on the Eastern Punjab Railway, when a special train, carrying Muslim refugees from Ambala to Pakistan, was derailed on November 24. A relief train was sent from Ambala Cantonment with medical and other equipment and staff immediately after the accident. Within six hours of the accident, the line was cleared for through traffic.

Collision near Kanchrapara

Several persons were reported killed and 39 injured when 16 down "North Bengal Express" ran into the rear of a goods train near Kanchrapara, about 28 miles from Calcutta, on the Sealdah Division of the East Indian Railway, on the morning of December 8. The accident might have been more serious but for two mitigating factors, namely, the reduced speed at which the two trains were proceeding in view of the scheduled stop at Kanchrapara, and the buffer effect produced by the baskets and boxes of vegetables and oranges inside the luggage van of the express.

The engine of the express ran into the brake van of the goods train and mounted its steelwork. The driver and first fireman of the "North Bengal Express" sustained injuries. Most of the casualties occurred in the third class passenger brake of the express, which overturned and was badly damaged.

POLAND

Recovery of Rolling Stock

The Ministry of Communications announces that 3,516 railway vehicles, removed from the stocks of the Polish State Railways, have been recovered, as follow:—

From	British Zone of Germany	1,177
,,	Russian ,, ,, ...	730
,,	American ,, ,, ...	674
,,	Austria (all zones)	675
,,	Czechoslovakia	260

FRANCE

Paris-Lyons Electrification

The drastic reductions of expenditure by the French Government will affect the French National Railways, but exceptions will be made in regard to the electrification of the line from Paris to Lyons, and other urgent work, which will be allowed to continue. Electrification is in progress along 200 sections of the line between Paris and Dijon. Now that the concrete bases for the pre-stressed high-tensile steel and concrete masts to support the catenary are in place, the laying of the S.N.C.F. and public telephone cables is being pushed forward rapidly. Because of induced currents in overhead lines, the cables are being laid in trenches, and this must be done before the masts are set up.

Preparation of the trenches between Paris and Dijon, a distance of 315 km., has been entrusted to seven firms. This work, which includes the making of surface cement channels in some places, will proceed at an average speed of 3 km. a day. The actual paying-out of cables from drums mounted on wagons of special trains will be effected rapidly.

The Problem of Snowdrift on British Railways

By Donald L. Champion, F.R.Met.S., A.M.I.R.S.E.,
Member of Committee, British Glaciological Society

FROM authentic records of the British Glaciological Society, it appears that the snowfall of the winter 1946-47 in this country was the heaviest and most prolonged at least since the year 1814, and the resultant delays to railway traffic due to snowdrifts in cuttings were doubtless without precedent.

It is unlikely that such severe conditions, lasting for so long a period, will be repeated for many years to come, but, even so, there is a marked tendency toward heavier snowfalls in Britain, and some considerations of the problem of snowdrift in railway cuttings may be worthy of attention.

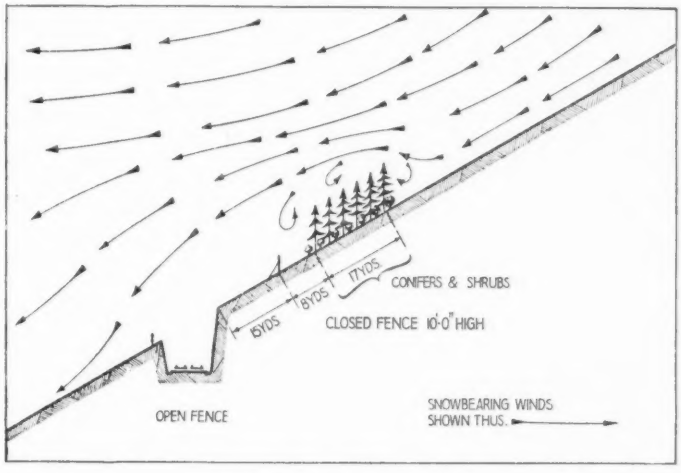


Fig. 1—Lee side cutting

Types of Snowfall

The frozen precipitates broadly termed snow, range from sleet and wet snow to dry granular snow which is more akin to small hail. The size and specific gravity of the snow particles vary within wide limits, but, fortunately, all forms of snow do not tend to form drifts, and those forms which do tend to drift will not do so unless they are accompanied by moderate to strong wind.

"Wet" snow (s.g. 0·2 to 0·8) falls in fairly large flakes, tends to remain where it falls, and when driven by wind will prove adhesive, blotting out semaphore signal arms and the roundels of colour light signals, etc.

"Ordinary settling" snow (s.g. 0·07 to 0·25) falls in small flakes, but has slight tendency to drift.

"Wind toughened" snow (s.g. 0·28) and "cornice" snow (s.g. 0·442) usually fall in individual grains or crystals, and if accompanied by wind will fill cuttings by drifting; and the latter also will build up cornices from the lee side of cuttings and station roofs, etc.

Result of Delay

Should the wind continue after the fall, snow soon becomes compacted and hardened into a sponge-like mass, which glaciologists term "firn" snow (s.g. 0·55). The term "firn" is borrowed from the Swiss, there being no equivalent word in the English language. The snow mass finally turns to "firn" ice (s.g. 0·8), and the longer the delay in clearing a cutting, the harder and denser the mass of snow becomes, and consequently much more difficult to remove.

Prevention is better than cure, and if the prevention of snowdrift entails the erection of snow sheds which completely roof-in cuttings, the first cost may be high, but, even if not entirely preventing drifting, a considerable reduction in the amount of drift can be obtained by the erection of snow fences and plantations of trees as "wind-breaks" along the railway.

The transport of fallen snow by wind into cuttings will be more severe when the cutting is normal to the snow-bearing wind on the lee slope of hills. In such cases, the planting on the up-wind side of a relatively narrow belt of coniferous trees, interspersed with lower and denser bushes terminating with a high, close-boarded fence about 15 yd. from the line, would prevent undue accumulation of snow in the cutting.

The fence on the down-wind side of the line should be of open wire or similar construction to allow free flow of wind down the slope away from the railway (F.g. 1).

The object of the coniferous belt is to produce eddies in the wind current, which cause the wind to deposit much of its snow, and to close and deflect upwards the "streamlines" of the wind with a resultant increase in velocity, which will carry the bulk of the remaining wind-borne snow well clear of the track before the streamlines re-open.

Cuttings to Windward

Where drifting occurs with winds normal to the railway on the windward slope, a similar plantation on the up-wind side of the line would tend to accumulate heavier snowdrift on the slope immediately above the cutting, thus encouraging avalanching on to the railway, and probably would aggravate the accumulation of snow in the cutting itself.

In this case, the fence on the down-wind side (up hill) of the cutting should be close-boarded, and if the slope is steeper than 1 in 2 a narrow belt of hardy bushes or shrubs beyond the fence will prevent the avalanching of snow from the slope on to the railway (Fig. 2). The windward slope of the ground itself tends to close the streamlines, and the coniferous belt is omitted to permit free air-flow, the fence being provided solely for the purpose of holding back snow from the edge of the cutting.

Location of Snow Fences

Snowfall can—and in the north at higher levels often does—fall with winds from any direction (in a horizontal plane), but the drier types of snow which tend to form drifts generally occur with winds having a marked easterly component. The orientation of wind-breaks presents no great difficulty, because from past experience engineers will know the dates of previous drifting, and the examination of the corresponding weather maps as published in the daily weather report of the Meteorological Office will at once decide from what direction the surface wind was at the time of the snowfall.

A knowledge of the local wind currents also is an asset, since, with certain air streams, the wind may be diverted by local topography, as, for instance, the tendency for winds in the Forth-Clyde plain to be

(*Continued on page* 76)

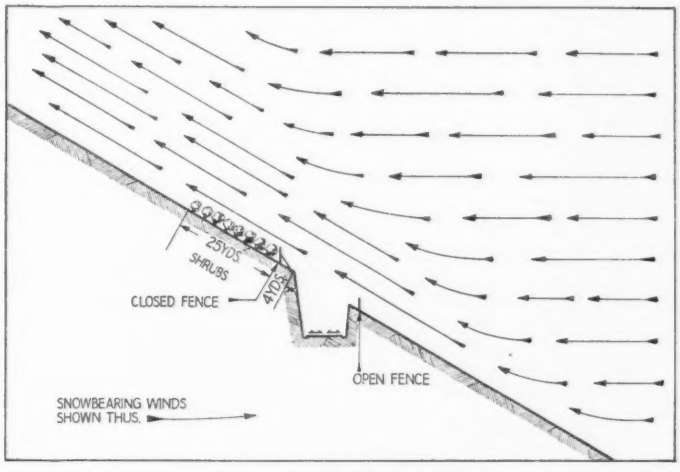
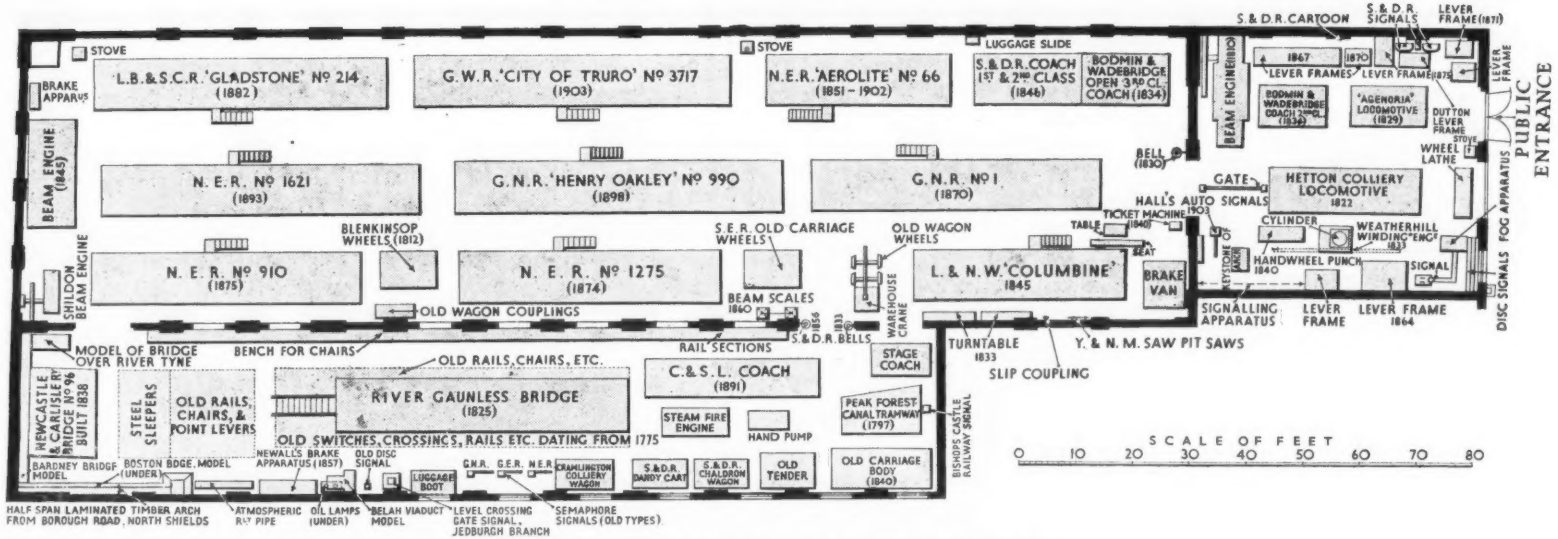
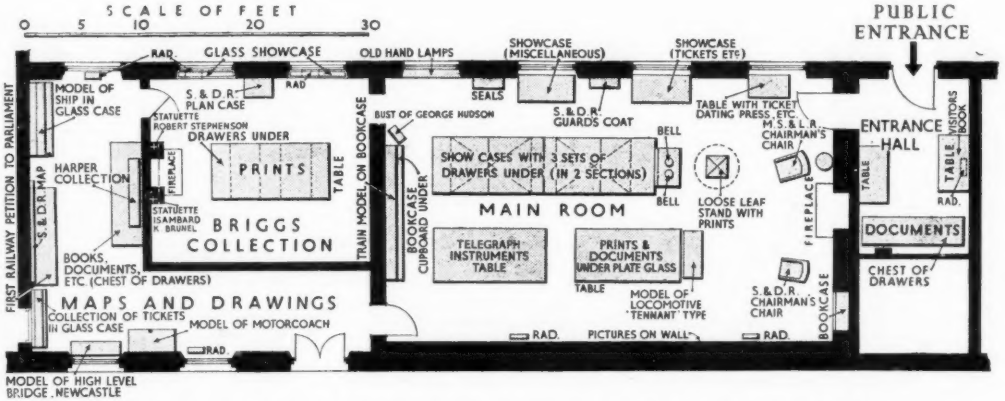


Fig. 2—Windward side cutting

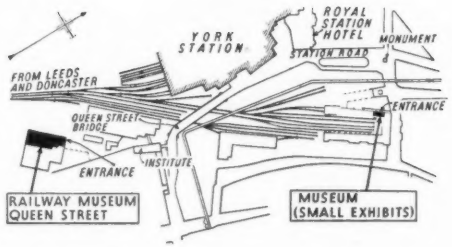
Arrangement of York Railway Museum



The large exhibits in the former engine works in Queen Street



The small exhibits in the former refreshment room of the first station at York



Site plan of the two sections of the museum
(See editorial article on page 68)

Railways in the French Zone of Germany

Restoration of lines and equipment has facilitated international as well as internal traffic

AFTER 18 months of working on the railways in the French zone of occupation in Germany, a record of the results achieved in restoring the transport network has been drawn up. When the French first set to work, they found that the tracks, administrative buildings, sheds, and marshalling yards had been put out of action everywhere by methodical destruction by the Wehrmacht engineers. Difficulties were considerable with regard to obtaining both materials and labour.

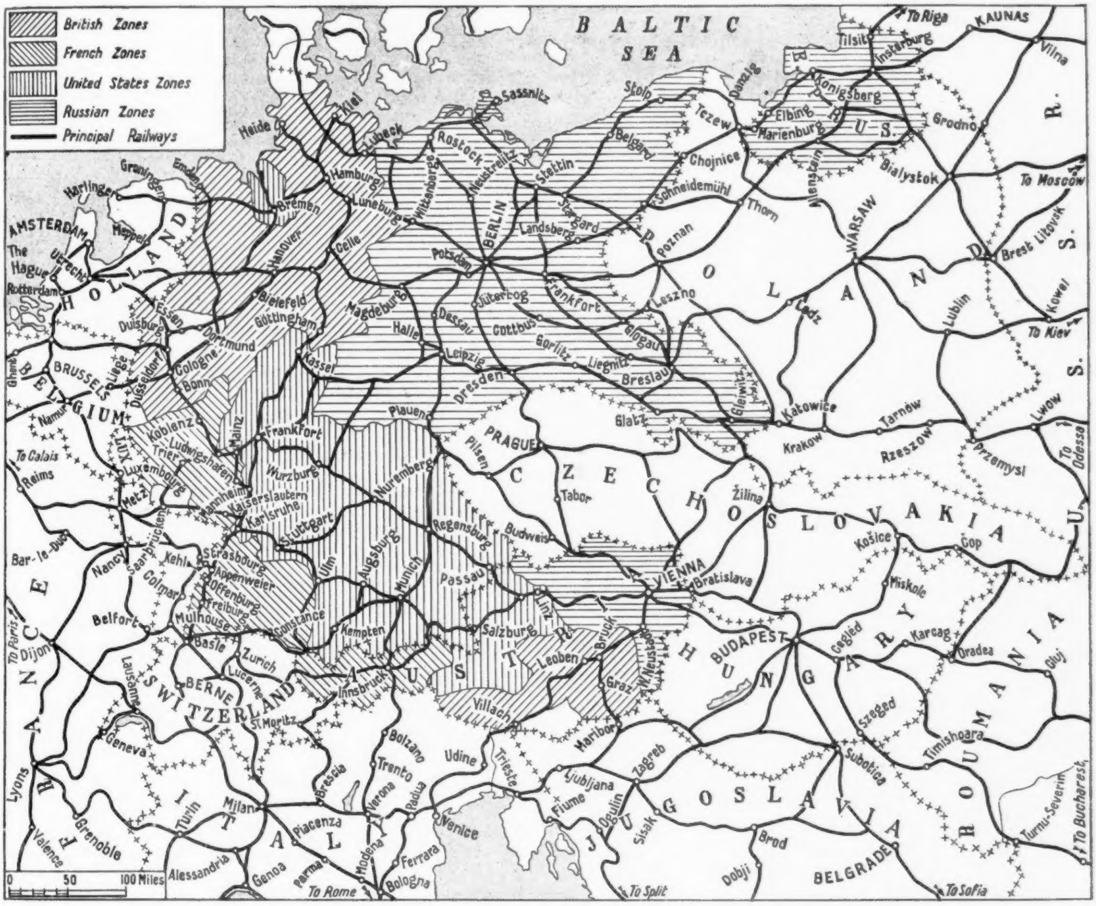
Before the war, the German railway network had been among the most dense in Europe, and in the zone now under French occupation counted 80 km. of railway per 100,000 sq. km. of area. The Reichsbahn owned 30,000 locomotives and 707,000 trucks, and 756,000 railway workers were employed. By May, 1945, 70 per cent. of the workshops and main stations had been destroyed, and out of 5,667 km. of line in the French zone, less than 500 km. were in working condition. All the Rhine bridges had been destroyed, so that the southern part of the zone was cut off from railway communication with France. The main building yards had been pillaged or destroyed, and most of the marshalling yards (Ludwigshafen, Mainz, Trier, and Koblenz) were useless.

The network in the French zone, amounting to 8,300 track-km., included 2,500 km. of double track and 3,000 km. of single track, with eight large marshalling yards and stations and workshops. In May, 1945, seven marshalling yards were completely knocked out, 700 stations destroyed, and all telephone lines cut; half the station buildings were destroyed and tracks useless. By July, 1945, 1,950 km. were being used under precarious conditions, and on July 4 a temporary bridge, the Kehl Bridge, was completed.

By September, 1945, the Offenburg-Freiburg and Offenburg-Appenweier sections were working, and in the north a link-up had been made with the American zone. Several lines fanning out to the south and west of Mainz were in operation, connections with Koblenz were achieved, and all links with Lorraine restored. In October, the Kehl-Freiburg route was extended halfway to Basle, and several junctions and branch lines were restored in Baden and the Palatinate.

The speed of work continued to improve until by the beginning of October, 1946, 5,219 km. out of 5,677 km. were in use, or 92 per cent. of the 1939 network. At the same time, half the destroyed buildings had been reconstructed temporarily, and four-fifths of the marshalling yards restored. By the end of May, 1946, 208 stations were open to traffic.

At the end of hostilities, 765 bridges and viaducts had been destroyed, representing a total length of 7,200 m., and requiring 16,000 tons of steel to fill the breaches. By January 1, 1946, 390 were restored, and on March 1 the figure had increased to over 400, representing 3,000 m., for which 6,000 tons of steel were used. Most of the viaducts rebuilt are only temporary structures, which will be replaced gradually by permanent erections when supplies of steel, cement, and other materials are available.



Division of Germany and Austria between the occupying powers, showing main railway routes

The reconstruction of workshops and goods depots went ahead with local materials and labour, the effort being concentrated on the workshops at Ludwigshafen, Konz, Kaiserslautern, Offenburg, and West Trier. Lack of materials, and above all, of machine tools, hampered the work considerably, as well as difficulties in recruitment of labour, whether specialised or unskilled.

Improvements in rolling stock have been steady but slow. In July, 1945, 656 locomotives were in service, increasing to 922 in November. In September, 1947, out of

a stock of 2,108 steam engines, 17 were being reconstructed and 1,169 were under repair. The German locomotives, however, are of an average age of 20 to 25 years, and to remedy the deficit the acquisition of 100 locomotives from Belgium has been considered. The number of electric locomotives (8, out of which 5 were serviceable in September) is so small as not to influence the motive-power position.

In October, 1946, the number of passenger coaches with bogies was 723, of which 290 were available for use; and there were 3,491 4-wheel or 6-wheel coaches, of which 2,120 were ready for use, giving a total of 4,214, with 2,410 serviceable vehicles. This marked a considerable improvement over the position in November, 1945, when, out of 3,521 carriages, only 807 were fit to be used. Luggage vans in service increased from 188 in 1945 to 427 in 1946.

By October, 1946, the French zone had 35,082 wagons out of 48,500 in serviceable condition, which figure increased to 40,000 at the end of December. The speed of repairs in the five workshops at Sarrebruck-Bonnach, St. Wendel, Kaiserslautern, Ludwigshafen, and Offenburg also increased considerably in the closing months of 1946.

The progressive restoration of rolling stock and buildings permitted a continuous improvement in railway traffic in the zone, although handicapped by coal shortages. It is noteworthy that by mid-summer, 1946, a balance had been attained between traffic demands and the transport the railways could supply. This situation could not be maintained during the winter, however, owing to the development of international traffic, particularly coal from Poland destined for France. A strict policy of priorities had to be imposed.

The total number of trains in service gives some idea of the railway activity in the zone. In September, 1945, it amounted to 1,164 a day, increased to 1,860 in December, and dropped to about 1,400 in May, 1946; then rose slowly to 2,100 in August and 2,370 at the beginning of October, 1946. Fluctuations were due to the military traffic and work on lines. The proportion of passenger to goods trains is difficult to establish owing to the mixed trains, but it may be estimated at about 63 per cent., showing that heavy transport is still fairly small compared with passenger movements, a characteristic of transitional economy.

Passenger services are increasing and improving. Since September, 1945, express services have been available between the zone and France, and have been introduced gradually between the zone and Austria. From October, 1946, passenger trains of all types were increased, particularly suburban trains, while international trains ("Orient Express," "Arlberg-Orient Express," and the Paris-Berlin express) are running under similar conditions to prewar. The position, however, is always dependent on coal supplies, and as a result suffers reduction when coal is not available.

Traffic crossing the French zone has developed considerably in recent months. There are about 15 trains a month between Czechoslovakia and France, 10 trains between Czechoslovakia and Belgium, 10 to 20 between Czechoslovakia and Holland, 22 between Denmark and Switzerland, and 5 between Holland and Switzerland. In the Saar, which has a special interest for France, 7,500 coal wagons are loaded weekly, against 16,100 in 1930; and to assure normal traffic, the area needs 13,000 tipping trucks, 1,000 passenger coaches, and 300 locomotives.

The zone employs 77,026 railway workers, or about 85 per cent. of the 1939 figures. Tracks have been restored speedily, mainly at the expense of less important viaducts and bridges, and it is admitted that the heavy use made of rolling stock, already old and worn, will necessitate large-scale repairs in the future. Finally, goods traffic has attained its peak, taking into account the coal supplies and difficulties of working, but the re-establishment of railway communications north of Trier will enable the journey *via* Sarrebrucken to be made more economically. Co-ordination of the common economic interests of the S.N.C.F. and the railways in the French zone is to be pressed on in the future, in pursuit of the economic liaison policy practised by France in Germany.

The Problem of Snowdrift on British Railways

(*Concluded from page* 73)

either easterly or westerly due to the higher ground to the north and south. In doubtful or difficult cases, the local wind system may be readily ascertained by the use of smoke projectors, or "no-lift" pilot balloons, on days when the winds are from the same direction as the snow-bearing winds of winter.

The number of days with snow lying on the ground depends on several factors, such as the initial depth of the fall, the subsequent air temperature, and the height of the ground above ordnance datum. Based on about 1,200 observations last winter from selected stations in Scotland, Westmorland, Snowdonia, and South Wales, the average duration of snow cover relative to height is shown graphically in Fig. 3. It will be noted that the relationship is rectilinear, the number of days $D = 0{\cdot}0307\ h + 18$, where h is the height in feet above ordnance datum.

There are many sections of line in this country reaching 500 ft. above sea level, and at this relatively low level the average duration of snow cover was 34 days, equivalent to nearly five weeks. At 1,000 ft. the figure reaches 49 days, or seven weeks duration, and at 2,500 ft. the figure is 95 days, over three months' duration.

From the above it will be apparent that in mountainous terrain the danger of avalanching will persist for a considerable time after cuttings have been cleared.

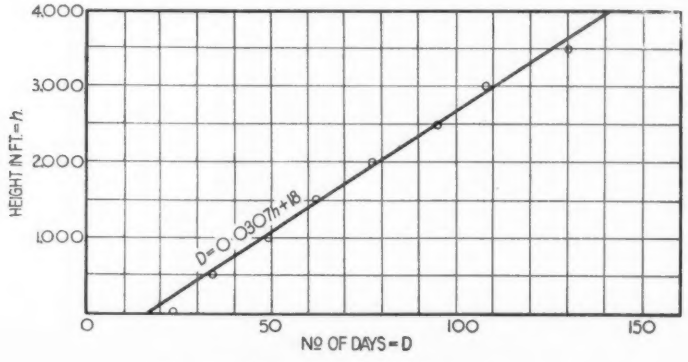


Fig. 3—Average duration of snow cover

CURRENT CARRYING.—Pyrotenax cables, which are composed entirely of copper and a mineral insulant, were invented a few years before the war, and first attracted public attention in 1937, when it was announced that the Louvre in Paris would no longer close at dusk. Previously, the curators of this famous art gallery had refused to instal any system of artificial lighting, owing to risk of fire. At about the same time, a few inconspicuous notices appeared stating that the first tanker wired with Pyrotenax cables had set off on its voyage across the Atlantic. Then came the war, when a special factory to meet Admiralty needs was built, resulting in a 500 per cent. increase in Pyrotenax output, and during the emergency large quantities of these cables were supplied also to the Army and for Civil Defence purposes. These and many other facts are given in this brochure issued by Pyrotenax Limited, Hebburn-on-Tyne, which also contains drawings showing the wide scope of these cables for peacetime needs, including railway stations, power stations, factories, ships, churches, business premises, and blocks of flats. The immunity of Pyrotenax cables to fire and heat is more than a safety factor, however, for they greatly simplify installation in proximity to furnaces, boilers, etc., and at the same time give economy in labour and materials and reduce maintenance charges. Wires and insulant together are encased in a seamless copper sheathing which serves all the purposes of a steel conduit. When subjected to a pressure of 80 tons per sq. in. a length of single core Pyrotenax remained unaffected in its capacity for carrying current. Tests have shown, also, that these cables will stand up to heavy trucks being bumped over them, and that they can be immersed in water or oil or exposed to extremes of temperature without coming to harm. Although tough, they can be bent with ease for passing round awkward corners. This brochure is confined to the business side, rather than the technical aspect of the subject, which is dealt with in a second booklet issued by this firm.

NEW RAILWAY SURVEY IN INDIA.—The Ministry of Railways (India) has sanctioned an engineering survey by the Great Indian Peninsula Railway Administration for a broad-gauge line from Choradongri to Pathakhora, a distance of about 11·5 miles, in the Nagpur district of that railway.

All-Steel Wagons, North-Eastern Region

Modern plant installed at Shildon Works has a weekly output of eighty 13*-ton high-sided open goods wagons*

WHEN the grouping of railways took place in 1923, most of the constituent companies which formed the London & North Eastern Railway already possessed various types of all-steel wagons, and with additional types built by the L.N.E.R., present-day stock of all-steel wagons is over 24,500. This number is made up chiefly of the following:—

Open goods up to 50 tons capacity.
Mineral end and side doors, 16 tons.
Mineral hopper up to 40 tons capacity.
Bolster wagons up to 42 tons capacity.
Container flat wagons up to 12 tons capacity.
Machine wagons up to 38 tons capacity.

Having had experience in the construction and maintenance of all-steel wagons, the L.N.E.R. was in a favourable position, when the necessity arose during the recent war to conserve timber, to develop still further the building of such wagons. It prepared to meet the increased demand by installing the most modern appliances and by re-arranging the available space at its Shildon Works.

In 1945, the L.N.E.R. decided to build all-steel 16-ton mineral end-door wagons, and, in considering the post-war problem of open goods wagons as distinct from mineral wagons, it decided also in the same year to build for general merchandise traffic 13-ton high-sided goods wagons composed entirely of steel, with the exception of the floor, which is made of wood to enable freight likely to move in transit to be wedged and secured. The policy of providing all-steel wagons was maintained under the direction of Mr. A. H. Peppercorn, the last Chief Mechanical Engineer of the L.N.E.R.

All-steel wagon construction has been revolutionised with the introduction of the latest design of 13-ton steel wagon, and to concentrate on the building of this type, a plant specially designed for the purpose has been installed recently at Shildon to give a weekly output of 80 wagons on mass-production lines. This is equal to one wagon every 35 minutes.

The whole process has been designed with the following objects:—

(1) To produce such a wagon in the shortest possible time.
(2) To reduce to a minimum the number of parts requiring riveting.
(3) To effect a reduction in the time required in handling component parts.

The 13-ton wagon as illustrated is a standard type of goods wagon, with underframe of completely welded construction, steel body, and timber floor.

Method of Construction

The method of construction is such that the body is built entirely independently of the frame. The two ends are each formed from one sheet, and the end and door stanchions, with the top rail, are secured to the body by welding. The top rail is of tubular section with a slot to receive the plate. They are then dropped into position and secured by rivets so that if it should be necessary to repaint the framework or to renew a section of the body, the whole or part of the body can be removed from the underframe by chipping out the rivets by which it is fastened to the underframe.

The floor boards are not individually fastened, but are fitted into the guides formed by a channel section at each side, passing the full length of the wagon.

Construction is carried out in stages, and the sequence is illustrated in the accompanying photographs and in the diagram shown below. First, the incoming rolled-steel sections are unloaded from the wagons by means of an overhead electrical travelling crane, shown in the photograph at the top of page 78. Under the crane gantry is a small shop in which are housed the latest types of multi-head oxy-coal-gas cutting machines and a six-headed solebar drilling machine.

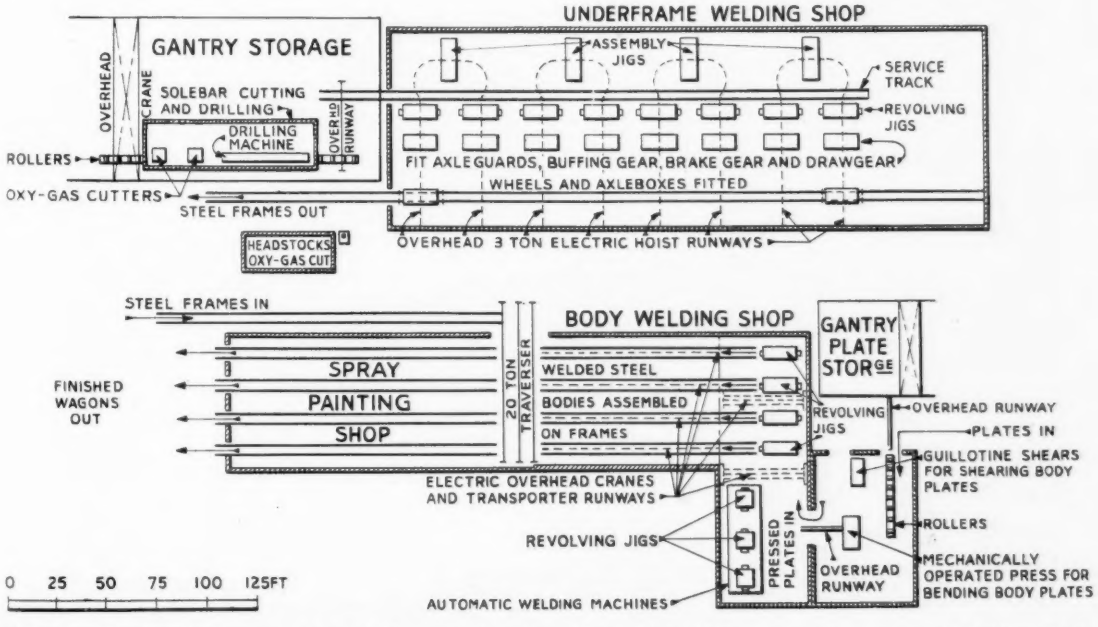
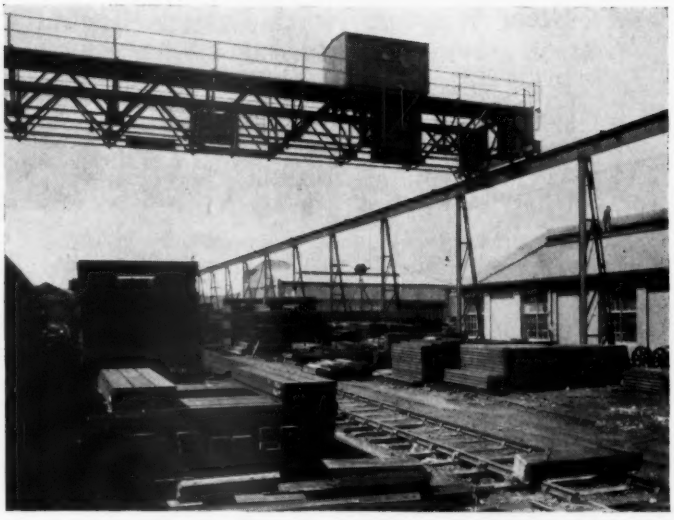


Diagram showing the sequence of work for manufacturing 13*-ton high-sided open goods wagons at Shildon Works on mass-production lines at a rate of* 80 *a week*

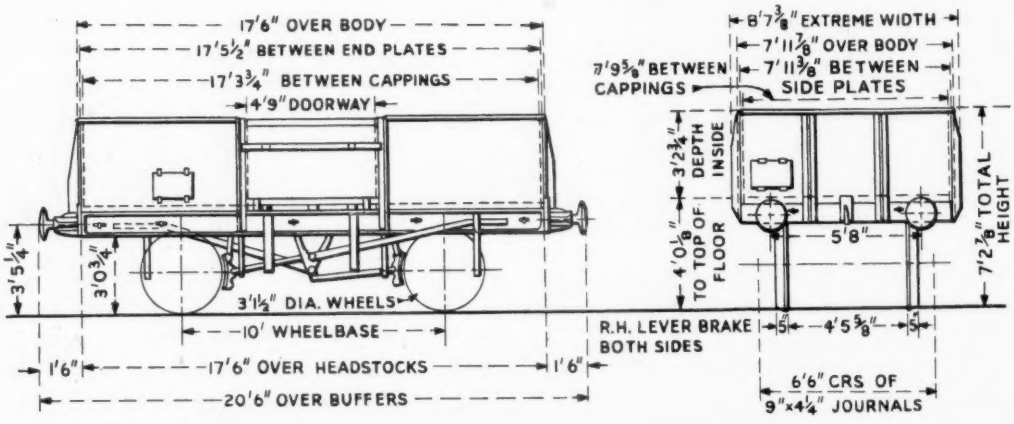
The overhead crane deposits the underframe channel members on conveyor rollers, by means of which they are passed through a hatch at the end of the shop to two three-headed oxy-coal-gas cutting machines, shown on page 79, which flame-cut the channel members to the required profiles. After this process, and while still on the conveyor rollers, the channel members are next passed to a six-headed solebar drilling machine (see page 79), where the necessary holes are drilled for renewable attachments, such as axleguards, spring shoes, and brake gear.

The Welding Shop

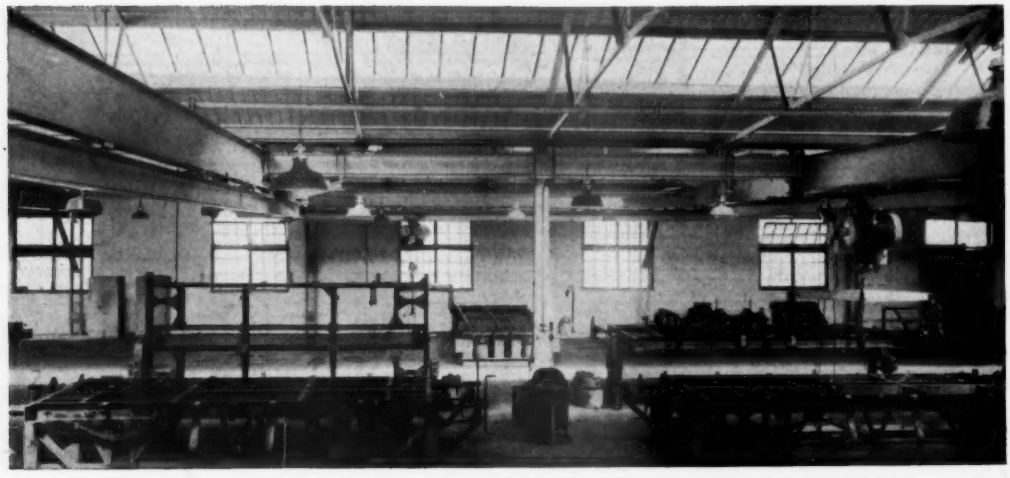
The underframe members are then conveyed to an adjacent frame-welding shop, shown at the bottom of this page, fitted with four separate self-contained units, each equipped with a horse-shoe shaped runway carrying two electrically driven hoist blocks which serve one fixed and two rotating frame-welding assembly jigs, two stands for the fitting of axleguards, buffers, etc., and also a length of rail sufficient for the "wheeling" of two underframes. The members are



Storage of channels under gantry crane at Shildon

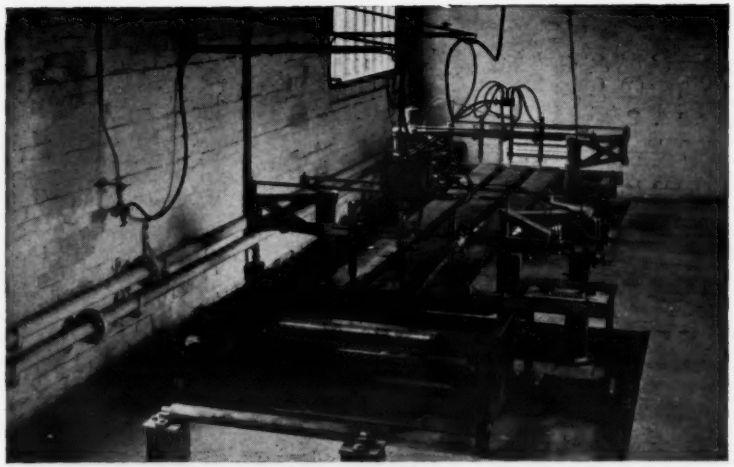


Principal dimensions of 13-ton high-sided steel open goods wagon which can be built at a rate of 80 a week on mass-production lines

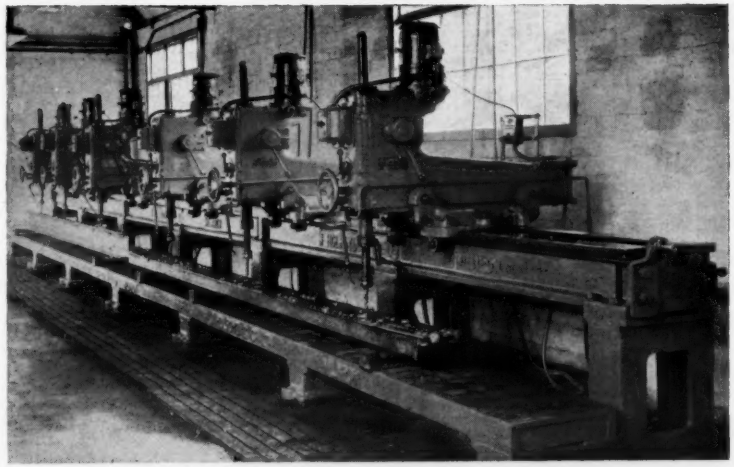


Assembly unit at Shildon Works for turning out welded underframes, and showing, also, overhead runway, tacking, revolving, and assembly jigs

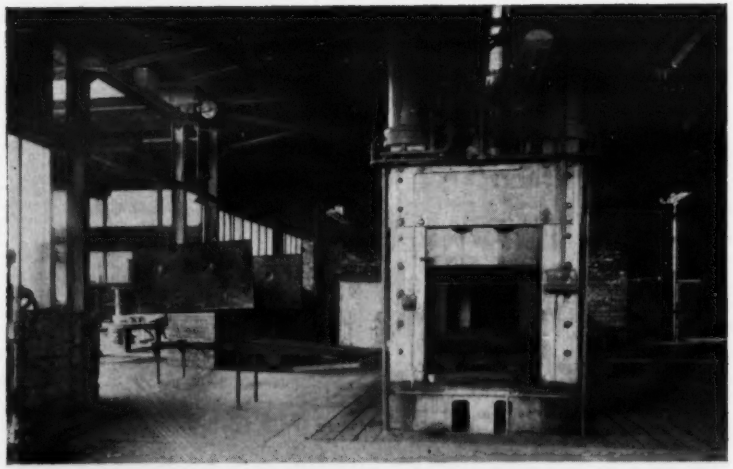
Mass Production of All-Steel Wagons, North-Eastern Region



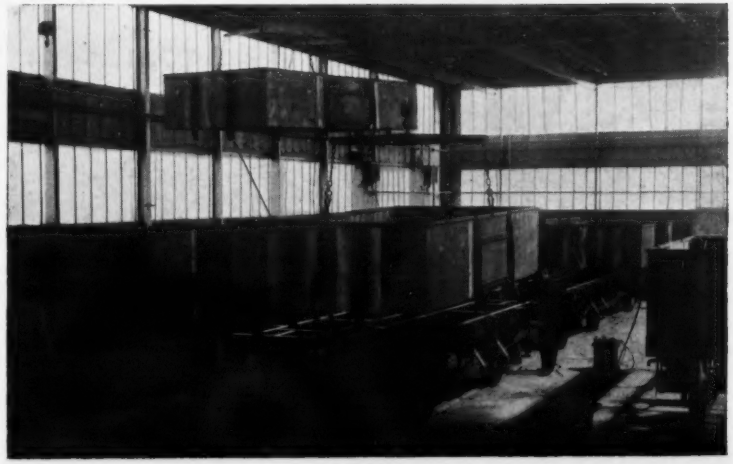
Profiling and cutting to length main underframe channels



Plant for drilling main members of the wagon



Half-body pressings leaving the mechanical press



Completed body being fitted to the underframe

Welding stanchions to body by automatic machines

It will be noted from the photograph of the completed wagons reproduced below that the wagon door is made from plate chequered on the inside, thus providing a non-slip surface for loading and unloading by barrows. The same illustration also shows the lashing rings interior of body sides for securing loads.

A Flexible Layout

Although the foregoing description is confined to the production of the open goods type of wagon, the same layout is capable of producing other types of all-steel wagons, as, for instance, the 16-ton end-door mineral wagon, which can be fitted with a riveted or welded type of underframe and pressed-steel side and end doors with pressed side and end stanchions. The side stanchions, having a flat portion on the outside, form a bearing when the wagons are being unloaded by tipplers.

The sides and ends are separate units, which facilitate assembly and repairs. A suitable angle is placed at the top of the wagon to give rigidity and prevent distortion when the wagons are being emptied. The floor, which is in three sections, is flanged, the flange being inclined to permit assembly of the body and underframe as complete units, and also to obtain maximum width of wagon. The flange of the floor is placed outside the body side-plate to avoid a ledge inside the wagon which would retain water and moist coal dust and give rise to corrosion.

placed in position on the fixed assembly jig and horizontally tack-welded.

The partially welded underframe is then passed to either of the two rotating jigs for completion, also by horizontal welding, and from this jig it is passed to one of the stands where the axleguards, buffers, brake gear, and drawgear are fitted. The complete underframe is then "wheeled," and, after a priming coat of paint has been applied, passes out of the shop to have the body fitted.

Further Stages

In the second stage, steel plates are passed into the press shop by means of a series of rollers, where they are sheared in size. They are then conveyed to a 1,200-ton mechanically operated press (page 79) on which each plate is pressed into shape to form one end and two side quarters of the wagon body, the necessary impressions for lashing rings being made in the plate at the same time.

Each pressing is then transported by overhead runway to the automatic welding machine shown above, where it is placed on a rotating jig. The side and end stanchions are clamped into position and welded by a four-headed automatic welding machine. This machine, which has been specially designed for such work, is fitted with three rotating jigs and two automatic welding carriages to ensure continuity of production.

The completed part is then removed from the jig, again by overhead crane, and, together with the remainder of the body ironwork, is assembled and welded to form a complete wagon body in another rotating jig which is a replica of the wagon underframe.

During the third stage, and after having been placed in position by means of transporter overhead runways (page 79), the complete wagon body is riveted to the underframe, which has been conveyed from the frame welding shop. Finally, the wagon is traversed to the paint shop to be spray-painted and lettered prior to release into traffic.

Wagons in the spray-painting shop

INSTITUTE OF TRANSPORT MEETING AT READING.—A meeting of members of the Institute of Transport in the Reading area was held recently at the town hall, Reading, having been convened by Mr. W. J. Evans, General Manager, Reading Corporation Transport. The members present were first entertained at tea by the Mayor (Alderman H. V. Kersley), former Chairman of the Transport Committee of Reading Corporation. Mr. Evans explained that the object of the meeting was to consider whether the members in the Reading district would wish to form a branch of some kind of the Metropolitan Section, to which they were attached. He then invited Mr. A. L. Castleman, Chairman of the Metropolitan Section, to preside. Sir Lynden Macassey (who was President of the Institute for 1924-25) then gave an address on "Transport and the Community"; afterwards a resolution was carried expressing approval for the formation of a branch of the Metropolitan Section for the members in the Reading area, and a committee was appointed to consider the steps to be taken and convene a further meeting; Mr. W. J. Evans was appointed Chairman of the Committee, and Mr. Walter Kershaw, Honorary Secretary. Mr. J. Dimmick, Director of Technical Education, Reading, spoke of the needs of the students and promised to assist when the time came.

INVESTIGATION OF EUROPEAN ROAD TRANSPORT.—A report on the possibilities of international co-operation in European road transport, which has been prepared by two groups of experts, will be presented to a meeting of the Inland Transport Committee of the Economic Commission for Europe in Geneva on February 2. Railways in Europe are now taxed to the utmost, while road transport is regarded as being relatively undeveloped. The report deals with the freeing of road transport from national restrictions and future international co-operation.

The "Australind" Express, Western Australia

New six-coach train on Perth-Bunbury route

Interior of first class carriage

A NEW train, comprising the most modern type of day coaches in Australia, was put into service on the South Western main line between Perth and Bunbury on November 24, 1947. The train is composed of two first class and four second class four-wheel bogie coaches, each 59 ft. long, 8 ft. 1 in. wide inside, 8 ft. 3 in. high inside, and weighing approximately 25 tons.

The cars are of the open saloon type, with a central corridor between two rows of seats set crosswise, and hinged doors at each end for intercommunication throughout the train. The wide windows are of the half-lift balanced type for good visibility; they are easily opened, and will remain in any desired position.

Comfortable, well-sprung seating has been designed specially after lengthy experiment. Upholstered in brown leather, with a high back, head rest, and arm rests on each side, each seat in the second class will accommodate two passengers. They are set in pairs, facing each other, and ample leg room has been provided. A folding table, hinged to the wall, is fitted for each pair of seats. This may be put up or down as desired and, in addition, is adjustable sideways to suit passengers' convenience. An extractor fan ventilator, driven by a windvane on the roof, is fitted in the ceilings of the coaches, and all metal interior fittings are chrome plated.

Noise Insulation and Lighting

The floor is insulated against noise, and covered with the department's standard brown linoleum. For interior decoration, the lower half of the walls below the windows is painted brown, then beige up to the luggage rack, and off-white to the top of the wall; the ceiling is white.

Modern fluorescent lighting is installed, the electric current being taken from self-contained power units on the train. Toilet facilities are built into each car, iced and hot water are available at the buffets, and entrance to the cars is made by central side doors opening into a vestibule with built-in steps for low-level platforms.

The intercommunication between cars is entirely enclosed to prevent dust and draughts entering to inconvenience travellers.

The train is equipped throughout with screw couplings, enabling it to move as a unit and obviating all jolting and bumping associated with the old type of loose-coupled car.

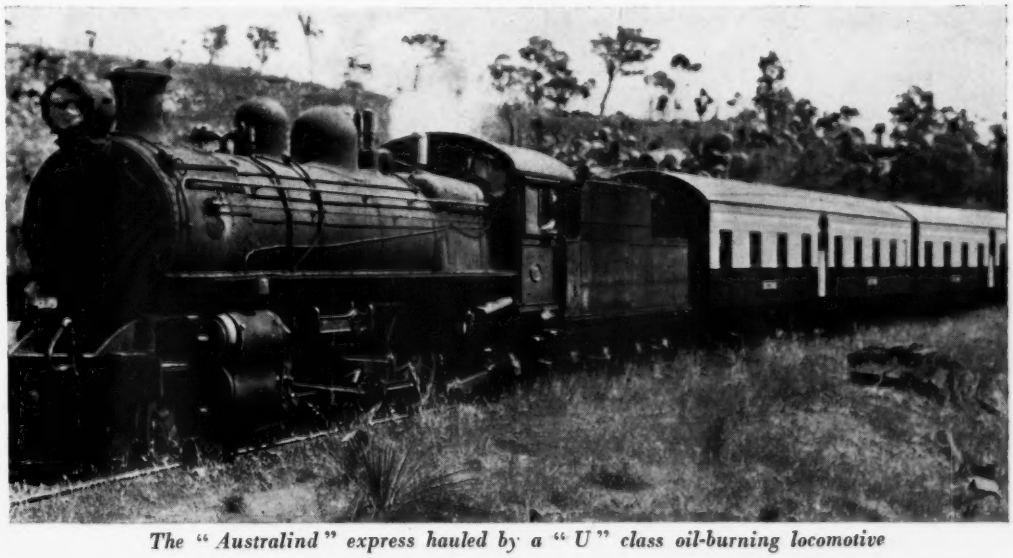
In the first class cars a somewhat similar standard of accommodation is provided, except that the seating is arranged with one row of single seats and one row of seats each accommodating two passengers. Two buffets are provided, one for first class and the other for second class passengers. Waitresses also serve light refreshments to passengers throughout the train during the journey.

Accelerated Schedule

Externally the train is painted green and cream, the standard colours adopted by the department for all new carriages. It is hauled by the department's latest "U" class oil-burning locomotive, recently imported from Great Britain. The schedule of 3¼ hr. for the 115-mile journey makes it the fastest as well as the most modern narrow-gauge train in Australia. The Western Australian Government Railways have a gauge of 3 ft. 6 in. The train was designed and constructed entirely in the Government Railway Workshops at Midland Junction, and provides seating accommodation for 75 first class and 207 second class passengers, a total of 282, with ample head and leg room for comfortable travelling.

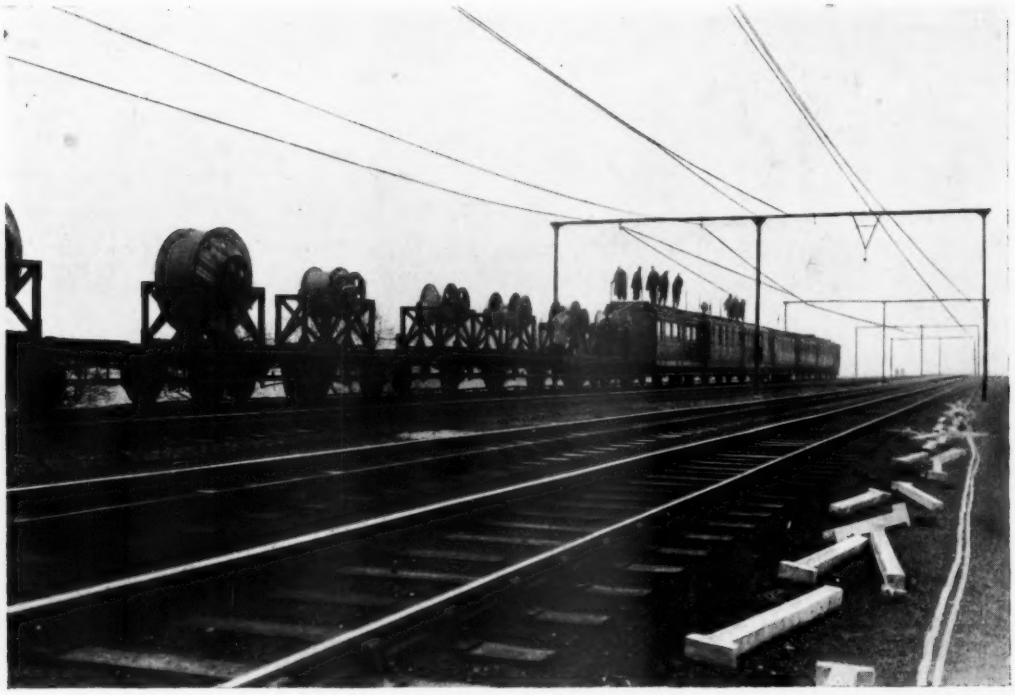
The train has been named the "Australind," commemorating the city envisaged by Marshall Waller Clifton on Leschenault Inlet, near Bunbury, about 1841. The name is derived from Australia and India, between which two countries he hoped to establish a flourishing trade. A rough cart track was made between Australind and Fremantle, and the journey by road occupied from 3 to 4 days—as compared with the 3¼ hr. now taken by the "Australind" express.

The new train is the co-ordinating link with the Railway Department's road services radiating from Bunbury, to which reference was made in our December 19, 1947, issue.

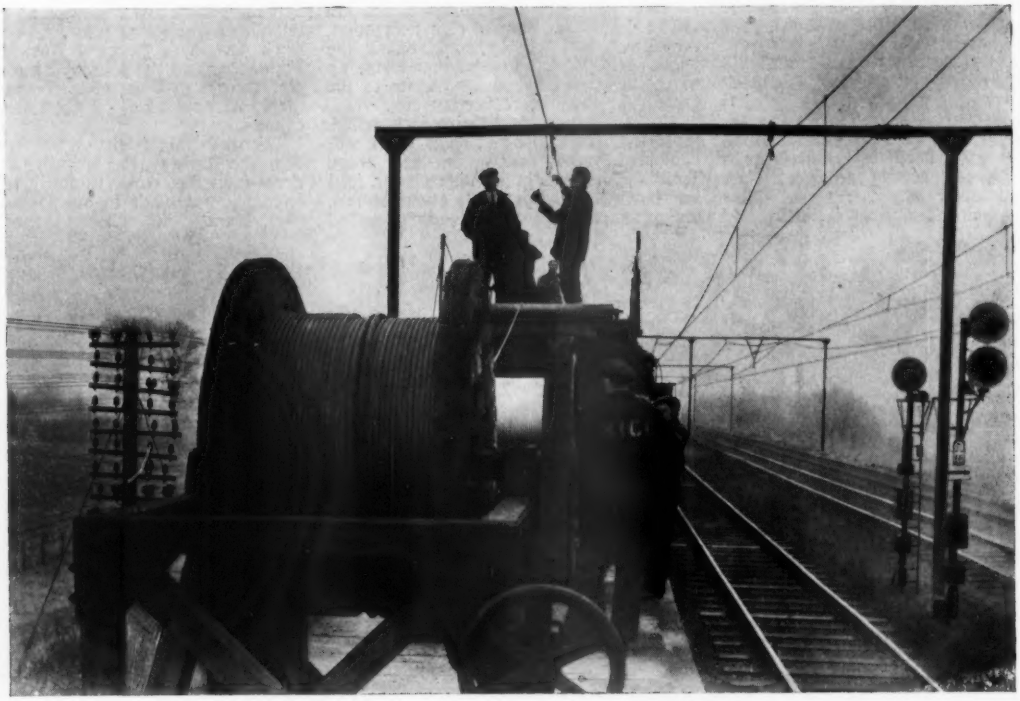


The "Australind" express hauled by a "U" class oil-burning locomotive

Eastern Region Shenfield Electrification



Wiring train engaged in erecting the auxiliary catenary for the overhead contact wire on the Liverpool Street and Fenchurch Street to Shenfield route. Cable route material is seen alongside the track



Running out the auxiliary catenary and attaching droppers

RAILWAY NEWS SECTION

PERSONAL

The Minister of Transport has appointed Mr. David T. Jones to be his Parliamentary Private Secretary. Mr. Jones, who is M.P. for the Hartlepools, is a G.W.R. signalman, a member of the N.U.R. Parliamentary Panel, and has been Chairman of the South Wales & Monmouthshire District Council of the N.U.R.

RAILWAY EXECUTIVE PUBLIC RELATIONS

At the request of the Railway Executive, Mr. C. Grasemann, Public Relations & Advertising Officer of the former Southern Railway, has been lent to the Railway Executive to assist in setting up a public relations organisation. Mr. G. Wynne Davies is acting as Public Relations & Advertising Officer for the Railway Executive, Southern Region, during Mr. Grasemann's absence.

DOCKS & INLAND WATERWAYS EXECUTIVE

The following appointments are announced by the Docks & Inland Waterways Executive under the British Transport Commission:—

Mr. S. E. Clark has been appointed Secretary to the Executive (his previous appointments have been Deputy Secretary, Southern Railway Company, and Assistant Docks & Marine Manager of that company at Southampton Docks).

Mr. W. L. Ives has been appointed Assistant Secretary, Waterways (he held the post of Deputy Clerk, Lee Conservancy Board, and was Honorary Secretary, Canal Joint Committee; during 1944-45 he was Controller of Inland Water Transport on the staff of the Allied Commission for Austria).

Mr. W. J. Nicholls has been appointed Accountant (he was formerly with the Port of London Authority; during the war he was Port Accountant, Clyde Anchorages Emergency Port).

Mr. C. B. Good has been elected a Director of the San Paulo (Brazilian) Railway Co. Ltd.

Sir Stewart Duke-Elder has been appointed Consulting Ophthalmologist to London Transport.

Mr. J. C. Spencer, Chairman of George Spencer, Moulton & Co. Ltd., has returned to this country after a four months trip to South America, where he visited the principal railways in Argentina and Brazil.

BURMA RAILWAYS

U Tun Thwin, hitherto Superintendent, Rates & Fares, Burma Railways, has been appointed General Manager. Brigadier J. C. B. Wakeford, who, until January 4 was Chief Railway Commissioner, has become Technical Adviser on Railways to the Government of Burma. Mr. W. J. Air, Deputy Railway Commissioner, Burma, proceeded on 2 years' leave preparatory to retirement on January 4.

Mr. Harold Rudgard

Appointed Chief Officer (Motive Power) to the Railway Executive

Mr. Harold Rudgard, O.B.E., M.I. Mech.E., M.I.Loco.E., M.Inst.T., who, as recorded in our January 9 issue, has been appointed Chief Officer (Motive Power) to the Railway Executive, has hitherto been Superintendent of Motive Power, L.M.S.R. He entered the service of the Midland Railway in 1900 as a pupil under Mr. S. W. Johnson. After going through the various workshops, he obtained six months' firing experience before entering the drawing office, and later was appointed District Locomotive Superintendent at Skipton, at Derby, and at Plaistow (London, Tilbury & Southend Section), successively. Mr. Rudgard was called up in the Territorial Army in 1914 and served for 20 months in the trenches; later he was attached to the Royal Engineers, Light Railway Section, as Superintendent of the Light Railways, 4th Army, afterwards commanding the Light Railway Workshops, Beaurianville, B.E.F., and Carriage & Wagon Depot, Audruicq, B.E.F. He retired from the Army in 1919 with the rank of Lt.-Colonel; in 1925 he was gazetted Lt.-Colonel, Land Forces, and he was called up on mobilisation in 1939, but authority was obtained for his retention in the railway service. He was gazetted Major in the Royal Engineers (Engineer & Railway Staff Corps) on February 1, 1944. During his service in France and Belgium he was wounded twice, and on two occasions was mentioned in dispatches. In 1919 Mr. Rudgard was appointed Assistant Superintendent of Freight Trains, Midland Railway, Derby, and, on the grouping, was made Assistant to the Motive Power Superintendent, L.M.S.R., Derby. In 1932 he became Divisional Superintendent of Motive Power (Midland Division), Derby, and was appointed Assistant Divisional Superintendent of Operation, Derby, in 1935; he became Divisional Superintendent of Operation there in 1937. Under Mr. Rudgard's leadership the Midland Division won the Express Passenger Train Competition for 1938, which carried with it the Byrom Cup; also the 1938 Divisional Freight Train Competition. He was appointed Superintendent of Motive Power in December, 1942. In our issue of August 8, 1947, we reviewed a publication, "Motive Power Organisation and Practice," which he had prepared for the L.M.S.R.

Sir John B. Greaves has been appointed a Director of Ruston & Hornsby Limited.

Mr. F. A. Martin has been elected Chairman for the ensuing year, and Mr. F. W. Rowe, Vice-Chairman, of the British Steel Founders' Association.

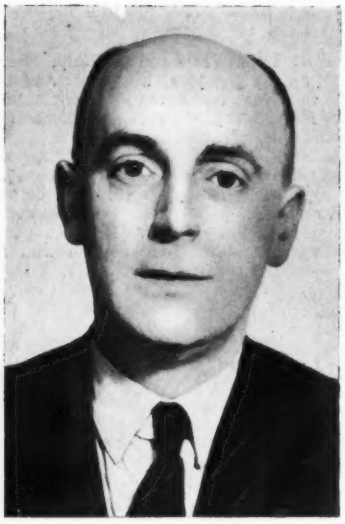
Mr. J. D. Russell and Mr. A. H. Farquhar, who have been members of the staff for some years, have been admitted into partnership in Binder, Hamlyn & Company.

Mr. H. S. Knott, Traffic Manager, Great Northern Railway (Ireland) has been elected Chairman for 1948 of the Traffic Officers' Committee, Irish Railway Clearing House.

Sir Harold Howitt, Deputy-Chairman of the British Overseas Airways Corporation since May, 1943, is retiring on March 31. He will be succeeded by Sir Miles Thomas, formerly of the Nuffield Organisation.

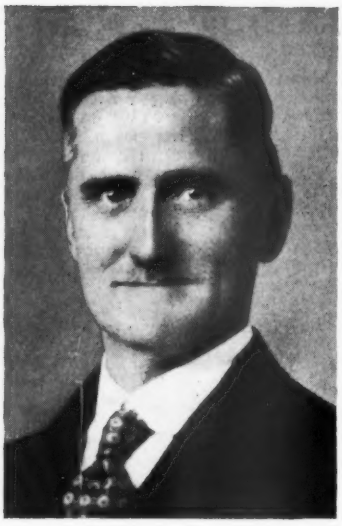
Mr. A. S. L. Thompson retired on December 31 from the position of Docks Superintendent, Garston, L.M.S.R.

Mr. A. E. H. Brown, M.Inst.T., hitherto Assistant Divisional General Manager, Southern Area, L.N.E.R., who, as recorded in our January 2 issue, has been appointed Assistant Chief Regional Officer, Eastern Region, under the Railway Executive, was educated at Oundle School. He joined the Great Eastern Railway in the Department of the Superintendent of Operation after being demobilised from the Army in 1919. Two years later he was transferred to the Civil Engineer's Department, and in 1923 was detailed to the Divisional General Manager's Office to assist the late Mr. F. V. Russell in the preparation of various schemes for the electrification of suburban and main lines. Mr. Brown was appointed Assistant Yardmaster at Ferme Park in 1931, Assistant Stationmaster, Kings Cross, in 1933, and Deputy Chief Controller, Central Control (Southern Area), in 1935. In 1937 he went to Kings Cross as Assistant to the District Superintendent, and was appointed full Assistant in 1939. He became District Superintendent, Sunder-



Mr. A. E. H. Brown

Appointed Assistant Chief Regional Officer, Eastern Region, Railway Executive



Mr. L. C. Glenister

Chief Accountant, L.N.E.R., 1942-47

Mr. F. Bostock

Elected General Secretary, Railway Clerks' Association

land, in April, 1940, and was made District Superintendent, Newcastle, in 1941. He was appointed Assistant Divisional General Manager, Scottish Area, in January, 1943, and to the corresponding post for the Southern Area in July, 1945.

Mr. L. C. Glenister, Chief Accountant of the L.N.E.R., who has retired, received his early training in accountancy in the Borough Treasurer's Department at Hastings from 1903 to 1911, and in March of the latter year joined the former Great Northern Railway, when he was posted to the Joint Lines Section at Kings Cross. A year later he was transferred to the Book-Keeping Section, where he was employed until in 1914 he joined the Queen's Westminster Rifles (16th London Regiment), with which he served until 1919, being wounded in France. In April of that year Mr. Glenister returned to the Book-Keeping Section at Kings Cross, where he remained until the grouping in 1923, when he was transferred to the Chief Book-Keeper's Office of the L.N.E.R. In 1928 he was appointed Expenditure Assistant to the Chief Book-Keeper, and on January 1, 1935, was promoted to be Locomotive Accountant, North Eastern Area, at Darlington. He was appointed Assistant Accountant in 1937, and Chief Accountant in 1942.

Mr. F. Bostock, who was last year elected General Secretary of the Railway Clerks' Association, was born at Gorton, in March, 1899, and joined the Great Central Railway as junior clerk in March, 1914. In December of the same year he enlisted in the Army and was posted to the Argyll & Sutherland Highlanders; he served at the front in France and Flanders, and on demobilisation in March, 1919, returned to the railway service, and immediately joined the Railway Clerks' Association. In the next year he successfully applied for a clerkship on the R.C.A. staff, and was first attached to the G.W.R. Divisional Office at Cardiff. He was later transferred to the Birmingham Office, then covering the L.N.W. and Midland Railways, and later the L.M.S.R., where he eventually became Chief Clerk. On January 1, 1937, the posts of Line Secretary for the G.W.R. and the Southern Railway were combined, and Mr. Bostock was appointed to fill the position. In September, 1940, he became L.M.S.R. Line Secretary, the position he vacated on his present appointment. He has twice been elected to the General Purposes Committee of the Trades Union Congress, and is at present a member of the General Council of the T.U.C., as well as of the management committee of the International Transport Workers' Federation.

We regret to record the death on December 24, at the age of 52, of Mr. J. Rankin, M.I.Mech.E., M.I.Loco.E., Locomotive Works Superintendent, Crewe,

The late Mr. J. Rankin

Locomotive Works Superintendent, Crewe, L.M.S.R., 1946-47

Mr. J. V. Gosling

Chief Clerk, C.M.E. Department, Doncaster, L.N.E.R., 1941-47

Mr. F. Sansoni

Appointed Traffic Manager, Buenos Ayres & Pacific Railway

L.M.S.R. Mr. Rankin served his apprenticeship with Andrew Barclay, Sons & Co. Ltd., of Kilmarnock. He served from 1914-19 with the Forces, and in 1920 joined the Midland Railway at Derby. In 1923 he was appointed Works Inspector at Derby; in 1928, Assistant to Works Manager, Crewe; in 1932, Assistant to Works Superintendent, Crewe; in 1934, Assistant Works Superintendent, Horwich; and in 1938, Assistant Works Superintendent, Derby. From September, 1939, until July, 1940, he acted as Works Superintendent, Derby, during Colonel Bellamy's absence on active service. Mr. Rankin was appointed Locomotive Works Superintendent, Derby, in May, 1941, and Locomotive Works Superintendent, Crewe, in February, 1946. The funeral service took place on December 27 at Christ Church, Crewe, and was followed by cremation at Carmountside, Stoke-on-Trent. Foremen of Crewe Works acted as bearers, and there was a representative attendance of railway headquarters officers, departmental staffs, Crewe foremen and inspectors, trade union officials, and members of the Crewe Mechanics' Institution Social Club and Crewe Works Sports Club & Institute.

Mr. J. V. Gosling, Chief Clerk, Chief Mechanical Engineer's Department, Doncaster, L.N.E.R., who retired on December 24, after more than 50 years railway service, joined the G.E.R. as a junior clerk at Stratford. In 1922 he was appointed Assistant Chief Clerk under Mr. A. J. Hill, then Chief Mechanical Engineer, and occupied that position under Mr. C. W. L. Glaze, Mechanical Engineer, Stratford. In 1930 he was appointed Chief Clerk to Mr. Edward Thompson, who succeeded Mr. Glaze. In 1936 Mr. Gosling was transferred to Doncaster as Chief Clerk to Mr. Robert A. Thom, Mechanical Engineer (Southern Area), and continued as such with Mr. Edward Thompson when the latter succeeded Mr. Thom. When Mr. Thompson was made Chief Mechanical Engineer Mr. Gosling was appointed Chief Clerk, and he continued in that capacity under Mr. Thompson's successor as Chief Mechanical Engineer, Mr. A. H. Peppercorn.

Mr. Francisco Sansoni, who, as recorded in our January 2 issue, has been appointed Traffic Manager, Buenos Ayres & Pacific Railway, is an Argentine by birth. He entered the company's service in the Traffic Department in 1899, and rose to be Divisional Traffic Superintendent, and then Commercial Superintendent, which post he has vacated to become Traffic Manager.

We regret to learn of the death on November 30 at his home in Wheaton, Illinois, of Mr. E. E. Russell Tratman, the well-known engineering writer, whose name is associated with his standard work "Railway Track and Maintenance." Mr. Tratman, who was born in Bristol (England) in 1863, and was thus in his 85th year, studied engineering under Edward Wilson, Consulting Engineer of London, but went to the U.S.A. in 1884 to join the staff of the Long Island Railroad. In 1886 he became a member of the editorial staff of *Engineering News* at New York, and subsequently acted also as a special agent for the U.S. Department of Agriculture on investigations into wooden railway sleepers. In 1897 he was transferred to Chicago as Western Editor of *Engineering News*, and in the same year published the first edition of "Railway Track and Track Work," which became widely known as Tratman on Track. This book was rewritten in 1926 as "Railway Track and Maintenance" and is still a standard work. Mr. Tratman also prepared texts on railway maintenance and structures for the International Correspondence Schools. He retired in 1932, but continued an active interest in engineering work and remained a member of the Committee on Yards and Terminals of the American Railway Engineering Association. He was a Charter Member of that Association, and also served the Illinois Society of Engineers as Secretary for 20 years, and as President in 1923.

We regret to record the death on January 6, at the age of 50, of Mr. Austin E. Kavanagh, F.C.A., who was Vice-Chairman of the Council of the London & North Eastern Railway Stockholders Association Limited.

Mr. H. Cousins, Publicity Manager, British Aluminium Co. Ltd., is retiring at the end of this month. The company's Publicity Department is being combined with the present Sales Research & Statistical Section under Mr. C. G. McAuliffe, as Manager, and the new department will be known as Publicity & Sales Research Department. Mr. E. G. Fielding, who will be responsible for the publicity work of the department, will have the title of Publicity Officer.

Miss E. O. Cullen has been appointed Librarian of the Bureau of Railway Economics, Association of American Railroads, Washington, D.C. Miss Cullen, who holds the degrees of B.A. and M.Sc. from the George Washington University, has been with the library of the Bureau of Railway Economics since 1917. It is the largest transport reference library in the world, containing over 300,000 books and documents.

We regret to record the death on January 11, in his 77th year, of Mr. George Ruston Sharpley, Chairman of Ruston & Hornsby Limited and of Davey, Paxman & Co. Ltd.; Vice-Chairman of Ruston-Bucyrus Limited; and a Director of Ransomes, Sims & Jefferies Limited.

Association of Railway Companies Locomotive Running Superintendents

The annual dinner of the Association of Railway Companies Locomotive Running Superintendents was held last month. The President, Mr. E. D. Trask (L.N.E.R., Edinburgh), was in the chair, and proposed the loyal toast. Mr. Trask then proposed "The Association," which was responded to by the senior member, Mr. C. M. Stedman (L.N.E.R., York). Colonel Harold Rudgard gave the toast of "Our Visitors," to which Mr. W. G. P. Maclure (late G.C.R.) and Mr. A. Cobb (late Southern Railway) responded. The guests of the evening were Messrs. W. G. P. Maclure; T. E. Heywood (late G.N.S.R.); J. G. Barr (late L.M.S.R.); and A. Cobb.

R.E., Supplementary Reserve, G.W.R. Units Reunions

The first post-war reunion of former members of 151 (G.W.) Railway Construction Company, Royal Engineers (Supplementary Reserve), was held recently at the Carlton Restaurant, Cardiff, when 93 former officers and reservists met for supper under the chairmanship of Lt.-Colonel R. H. Edwards, who was Officer Commanding the company from 1937 to 1940. On that evening also, in another part of the same restaurant, a similar function was held by former members of 152 (G.W.) Railway Construction Company, R.E. (S.R.), when 86 former officers and reservists met under the chairmanship of Lt.-Colonel E. C. Cookson, who was commanding the unit at the outbreak of war in 1939. After separate suppers, all those present joined for a smoking concert and "sing-song."

Mr. E. A. J. Bilham, M.C., B.Sc. (Eng.), A.M.I.C.E., who last year was appointed District Engineer, Guide Bridge, L.N.E.R., joined the G.E.R. Engineer's Department at Liverpool Street in 1919. In 1921 he was transferred to Stratford as Junior Assistant. In 1925 he was appointed Chief Assistant, Derby District, L.N.E.R., and in 1928 was posted to the Engineer's Construction Office, Kings Cross, on reorganisation of districts. In 1930 he was appointed Chief Drawing Office Assistant, Maintenance Office, Liverpool Street, and afterwards at Kings Cross. In 1943 he was made Acting District Engineer, Leeds, in which appointment he was confirmed in November, 1945. During his period in the Maintenance Office from 1930 to 1943, Mr. Bilham was engaged chiefly in dealing with questions of permanent way standardisation, maintenance, design and research, including the use of mechanical appliances, application of welding to permanent way, methods of relaying and the preparation of track for high-speed running.

Mr. J. W. Womar, previously Managing Director, East Midland Motor Services Limited, has been appointed Chairman, in place of Mr. W. T. James, resigned from the board. Mr. W. T. James and Mr. J. W. Womar have resigned from the board of Hebble Motor Services Limited, of which Mr. R. W. Birch and Mr. E. L. Taylor have been appointed Chairman and Managing Director, respectively.

Mr. L. J. Callaghan, Parliamentary Secretary to the Ministry of Transport, attended a meeting of railway personnel held in Edinburgh on January 11 to celebrate the nationalisation of the railways. He deputised for Mr. Alfred Barnes, Minister of Transport, who was not present on account of loss of voice.

Sir Cyril Hurcomb, Chairman of the British Transport Commission, left London on January 13 on a visit to the Scottish Region of the Railway Executive, accompanied by Mr. J. C. L. Train (member of the Railway Executive) and Mr. J. H. Brebner (Chief Public Relations & Publicity Officer of the Commission).

British Transport Commission

The British Transport Commission announces the appointment of Mr. J. L. Henderson as Public Relations Officer. He will have charge of Press and public relations in the Department of the Chief Public Relations & Publicity Officer. The Advertising Association, of which Mr. Henderson is now Director & General Secretary, has agreed to release him to take up his new duties at the end of the month.

Mr. J. Noel Phillipps, who was Operating Manager, Scotland, L.M.S.R., until December 31, 1947, has been decided for some time to retire on reaching the age limit, to take up work of a voluntary nature in which he is particularly interested. He has, therefore, decided to retire at the end of April, 1948, but until that date he will place his wide knowledge of railway operating at the disposal of the new organisation as Assistant Operating Superintendent, Scottish Region.

London Transport Plans for 1948

Road and rail extensions and improvements

Road and rail plans for the current year were given in some detail by Lord Latham at a Press conference on Monday, at which he said that the first aim of the London Transport Executive was to continue the assault on the queues. The bus programme provides for putting 1,200 new buses on the road in 1948, as an instalment of the total of 4,000 on order. There is a three-stage bus plan for London. Stage 1 is to replace outworn buses which have far outlived their normal use. Stage 2 is to strengthen existing services which are often inadequate. Stage 3 is to open new routes and extend existing routes. The individual Londoner is travelling one-fifth more than he did before the war, and there is a need for some 500 additional buses more than the present fleet of 9,000 road vehicles. At present, 354 hired coaches, which it is hoped to keep until March, are augmenting the Central Area bus services.

In 1948 it is hoped that a new type of wider bus will appear on the streets. Its width will be 8 ft. instead of 7 ft. 6 in., and its wider gangways and seats will give added passenger comfort and facilitate the conductor's passage through the bus. There are 500 of these extra wide buses on order, for use at first on suburban routes.

The conversion of the South London trams will have to wait possibly five years because of the slowing of manufacture of new buses due to national requirements. London Transport spent £1,000,000 on the tramways in 1947 to keep them in a state of efficiency pending replacement.

Railway Plans

During 1948 it is hoped to extend the Central Line both east and west. From Woodford it will be extended to Buckhurst Hill and Loughton at the end of the year, and from Newbury Park to Barkingside, Fairlop, and Hainault this summer. Between Hainault and Woodford, which constitutes the north side of the Fairlop Loop, a shuttle service will run, serving Grange Hill, Chigwell, and Roding Valley. In the autumn the Central Line will be extended in the west to Northolt, South Ruislip, Ruislip Gardens, and West Ruislip.

Also late in this year, it is planned to complete important improvements on the Metropolitan Line. Bottlenecks at Harrow-on-the-Hill and Preston Road are being abolished by relaying five miles of track. When this is completed, it is intended to increase the frequency of trains between Uxbridge and Baker Street from 8 to 12 an hour.

Under the Government plan for deferring capital works, it will not be possible to proceed with the Northern Line extensions as rapidly as at one time was intended.

To reduce inconvenience to passengers when Underground delays occur, an all-station broadcast information network is to be completed this year. Loudspeakers in the booking offices of every station will broadcast to the staff from the Central Traffic Control simultaneous information of delays, sudden frost, special crowds, etc., enabling the best possible traffic arrangements to be made in the minimum time, and the public to be kept better informed. The G.P.O. TIM idea is being used in connection with this scheme. Messages sent from the Central Control over the loudspeaker system will be recorded, and any porter will be able to get a recorded repetition of the message by dialling a number on the telephone network. This year, also, a telephone system will be set up giving an instant link between the drivers of tube trains in tunnels and the Central Control.

De-icing machines on the Northern Line will be fitted by February, and completed on the remaining lines before next winter.

Of the 143 new Underground cars on order, the first are expected in July. An additional escalator will be installed at Holborn and another at Chancery Lane during the year. As soon after as possible, a fifth escalator will be provided at Liverpool Street.

The installation of jointless rails in half-mile lengths will be continued in 1948 and eventually the whole of the Underground will be relaid on this method. London Transport has been granted a licence recently to use short-wave wireless experimentally. A central station working on 77·2 megacycles is to be installed at Earls Court and will enable the engineers to communicate with one another on the job, to pass demands for tools and materials instantly for emergency work, and so on.

Plans for improving staff amenities include a five-year programme for more and better canteens. A large part of this programme, comprising no fewer than 17 additional canteens and 16 reconstructions or extensions, is planned for completion in 1948. The London Transport canteen organisation is now the largest of any industrial organisation in the country, and serves 120,000 to 130,000 meals a day.

Signal and Telegraph Maintenance

Dual maintenance discussed at the Institution of Railway Signal Engineers

"Some Aspects of Signal and Telegraph Maintenance" were dealt with by Mr. David Old in a paper given at the Institution of Railway Signal Engineers on January 7, with Mr. F. L. Castle, President of the Association, in the chair. Subjects covered were: the organisation of maintenance on a planned basis, making the best use of staff and materials; periodic inspection of equipment; a "work unit" system for planning duties; the choice of maintainers; and allocation of work to suit the abilities of individuals. Arguments for and against the dual maintenance system were set forth and overhauling, servicing, and fault reporting and recording discussed. The use of grease guns and plug-in equipment was also touched on.

A lively discussion on the paper was opened by Mr. E. G. Brentnall, who thought that Mr. Old's most important point was systematic examination of apparatus by the linemen. The unit system was attractive, but would need applying with care. Dual maintenance necessitated well-trained staffs, and to this end schools equipped with full-sized apparatus were giving good results. A well arranged fault reporting and classifying system would keep signal engineers informed and able to prevent trouble.

Mr. A. Mass emphasised that maintenance was intended primarily to prevent faults. Everything depended on the competence of the maintainers, and hence on the training methods in force. Much had been done with the help of schools, lectures and travelling instructional vans. It was not easy to plan signal and telegraph duties, making due allowance for local conditions. In engaging linemen for country districts the want of suitable housing near their work was a drawback. Dual maintenance was satisfactory if the right type of man, who should be young and keen, was available, but it was a waste of time to attempt to train a mechanical man of middle age to deal with the intricacies of modern electrical equipment. Relays, signal mechanisms and similar apparatus needed periodic overhaul. A code system of fault reporting and recording was most valuable.

Mr. L. J. Boucher thought a work unit system impracticable, as it was subject to many variables. It took an exceptional man to cover both sides of the work and a mechanical man of 55 could not learn the electrical side of the work. He did not favour the use of lower grade labour for certain jobs only, such as cleaning, oiling and renewing batteries. This class of worker would have little chance of acquiring the knowledge necessary to advancement in the service.

Mr. H. E. Cox, in support of Mr. Boucher's argument, cited his experience in India, where they had not found combination of mechanical and electrical duties in one man practicable.

Mr. A. W. Woodbridge said the G.W.R. had employed dual maintenance for many years and had succeeded in training mechanical men of 60 to become good telegraph linemen. They found no real difference between the number of failures with either system provided lengths of maintainer's sections were not allocated too rigidly without taking local circumstances into account. The G.W.R. set up two well-equipped schools with first-class instructors, and newcomers, with no knowledge of railway work, were enrolled for a three months' course. After working with competent dual linemen for a further three months they became excellent assistant linemen.

Mr. F. Mann felt that varying local conditions and other factors would render any work unit system impracticable. He had not found a man who was 100 per cent. competent mechanically and electrically, and failed to see how that was possible with present-day equipment. He did not favour putting linemen with learners.

Mr. F. J. Beirne thought there was much to be said for dual maintenance in certain places and for the separate system in others. It was not practical, for instance, to have two men concerned in looking after a point motor.

Mr. J. English stressed the need for accurate fault reports. He suggested that in heavy traffic areas the separate system seemed the better.

Mr. F. W. Young considered that where a planned roster system had been carefully worked out and thoroughly tried, it had proved itself. In major interruptions responsibility should be taken not by the lineman but by the supervisory staff. He considered that the scheme proposed in the paper of employing separate lower grade labour for cleaning, oiling, etc., would lead to a clash of personalities and other problems.

Mr. A. E. Walker thought a sound system of fault reporting essential from the designer's point of view. He had seen

some extraordinary, even absurd, reasons given for failures. A few failures, incompletely understood, sometimes led to a panic demand for alterations, which would upset production methods.

Mr. A. M. W. Dyke recommended a tabular system of fault reporting, obviating the writing out of numerous details. If they took men into their confidence and made them feel they were being helped, they would get good results.

Testing after Servicing

Mr. J. W. Irving showed how, with proper reporting, a complete picture of the performance of a piece of apparatus could be obtained and the percentage of failures with different types assessed. Testing after servicing was very important and for large installations needed special staff. Dual maintenance could be made to work well in rural districts and saved travelling time.

Mr. F. Downes strongly supported the plug-in system of relays, which he hoped to see generally adopted in the future. It was especially necessary in all complicated layouts.

Mr. E. E. Pierce stressed the value of regular servicing in reducing faults and the importance of complete records. Apparatus should still be in fair condition when brought in for servicing. He thought that the oil and grease gun systems of lubrication had each their own spheres of usefulness. Oil-less type bearings had been developed and applied with success to certain items of equipment. The plug-in system had led to economies in changing wires, reducing time and risks of error. Corrosion was a serious trouble and certain parts needed designing specially in an endeavour to reduce or eliminate it. Information gathered from fault reports should be laid before designers and manufacturers. More attention to bearings was needed, so that re-bushing could be carried out during servicing, which could often be done at about 25 per cent. of the cost of a new article. Some items, such as springs, became fatigued and had to be discarded.

Mr. Callaghan Pays Tribute to Road Haulage Association.—Subsequent to a luncheon at which leading officials of the National Road Transport Federation and the Road Haulage Association met representatives of the Ministry of Transport, Mr. James Callaghan, M.P., Parliamentary Secretary to the Ministry, has written as follows:—

I should like to take this opportunity of saying how much I appreciate the energy which the Road Haulage Association has put into obtaining vehicles for the exceptional carriage of deep-mined coal. I shall continue to rely upon the co-operation of the Association in meeting the needs of essential traffic.

Underground Railway for Lisbon.—Reuters reported from Lisbon on January 6 that the Lisbon Town Council was to form a limited company, the Metropolitano de Lisboa, with a capital of 4,500,000 escudos, to study the construction of a new underground railway for Lisbon. Last year the Portuguese Government authorised the council to grant exclusive rights of concession for the establishment of one or more companies to build and operate an underground railway system in Lisbon. The new company eventually will have the right to construct and operate the underground service. It will undertake to submit to the council within three years the proposals for the concession to operate the service.

Sand Delivery to Former L.N.E.R. Locomotives

Use of flexible pipe for direct delivery from storage bunkers to locomotive sand boxes

Filling engine sand boxes at many locomotive depots is carried out by pouring the sand by hand from buckets, though for a number of reasons, this method has never been really satisfactory. The sand dried by furnaces of various types is screened to eliminate pebbles and rubbish, and then is stored in bunkers which usually are in the furnace house, unless there are arrangements for the transfer of the dried sand bunkers in the shed, or at the preparation pits.

The usual method of transferring sand to the engine sand boxes is by a bucket of special design, which has a large lip from which sand readily can be poured; these buckets are lifted on to the engine running plate, and an engineman removes the sand-box lids, and pours sand into each box until they are all full.

The disadvantages of this system are obvious, and the time and labour expended in carrying and lifting the sand is considerable, especially where eight- and ten-coupled engines are concerned. Certain modern engines have been constructed with their running plates over the coupled wheels, and the effect is that the sand buckets have to be lifted to a higher level than in the case of older engines with lower running plates and splashers. Unless the buckets can be kept perfectly dry, there is a risk of the sand becoming damp and being put in to the sand boxes in this condition, often resulting in the ultimate failure of the sanding apparatus; also there usually is difficulty in pouring the sand from the bucket into the mouth of the sand box, and considerable risk of the spillage of sand over the valve motion, axleboxes, and other vital parts.

Delivery by Flexible Pipe

To avoid these difficulties, an arrangement has been devised at March locomotive depot, whereby sand is delivered direct from the storage bunkers to the engine sand-boxes by a flexible pipe. In the sand-drying plant at March the sand is dried by a Kelbus furnace, and after screening, is blown from the furnace house to overhead hoppers situated over the disposal pits; until recently the sand was drawn from these hoppers into buckets, and handled as described.

One set of hoppers was altered by being raised about three ft. to provide the necessary height, and after the removal of the original outlet pipes, flexible hoses, two under each hopper, were fitted in their places, and have a nozzle and a valve at their lower ends. As will be seen from the accompanying illustration, enginemen can now pour sand into each engine sand-box with the minimum of labour, and with some saving of time. There are two hoppers in the set so that a pair of flexible pipes is available on each side of the engine, and as the pipes in each pair are unequal in length, the enginemen can select the more suitable according to the height of the engine sand-boxes from the ground, a dimension which varies considerably among the various locomotive classes.

Sand delivery apparatus in use

The main advantages of the new installation, which is claimed to be the only one of its type on the British railways, are the reduction in the time taken to fill the sand boxes, which gives a small overall reduction in turnround time, the reduction of sand spillage over motion parts, and elimination of transfer buckets.

Reconstruction at Liverpool Lime Street, London Midland Region.—It is expected that the present remodelling of Liverpool Lime Street Station will be completed in two months' time. Among the changes being carried out, Platform 7 is being increased in length by 10 yd., bringing the total to 324 yd.; Platform 6 is being lengthened by 76 yd.; and Platform 8 by about 70 yd. The permanent way layout is being revised, and sharp curves are being eliminated in connection with this work and the lengthening of the platforms. The existing signal box will be removed from its position in the centre of the lines approaching the station, and a new one will be built on the right-hand side of the layout, looking towards Edge Hill. The platform alterations will increase the capacity of the station by 22 coaches, or the equivalent of two or three additional trains.

Transport Organisation in Ulster

Present status of N.C.C. and transport merger proposals

The following statement was issued by the Railway Executive (Northern Counties Committee) in Belfast on January 1:—

"Although as from today the systems of the British railway companies are taken over by the British Transport Commission, special arrangements have been made in respect of the Northern Counties Committee by which that committee, while within the main framework of the new organisation, retains autonomy in Northern Ireland.

"The ownership of the N.C.C., as part of the L.M.S.R. system, is vested in the Transport Commission, but the Board of Directors, of which Viscount Massereene & Ferrard is Chairman, will remain in existence, and will continue to direct the various activities of the N.C.C. as hitherto, subject to reference on legal and financial questions to the Transport Commission, of which body a Belfast man, Sir William Wood, is a member.

The Belfast-Heysham and Larne-Stranraer railway-owned cross-channel steamship services will be operated by the British Transport Commission, but the N.C.C. will act as agents on their behalf for the shore establishments at Belfast and Larne."

Merger Proposals

Meanwhile, heads of the railway companies and the Road Transport Board in Northern Ireland are awaiting the Ulster Bill, foreshadowed in the King's Speech at the opening of the present session of the Northern Ireland Parliament, which will reveal the complete new pattern for public transport in the Province.

Since the White Paper was issued by the Northern Ireland Government in 1946, numerous discussions between the Ministry of Commerce and representatives of the transport industry have taken place, and it is suggested that these may have led the Government to modify the principal recommendation contained in the White Paper, namely, "that only the merger, into a single undertaking, of the Road Transport Board, the Belfast & County Down Railway, the system of the Northern Counties Committee of the L.M.S., and the system of the Great Northern Railway in Northern Ireland, offers any reasonable prospect of obtaining an efficient and solvent system of public transport."

In Great Northern Railway circles there is a feeling that the Government may find it difficult, or even undesirable, to divide its undertaking into two sections—one public-owned in Northern Ireland and the other a private concern in Eire. This view is based on the difficulties which would be involved in allocating rolling stock and other property as between the two portions of the line—complications which it is thought may influence the Government to abandon the idea of a comprehensive merger undertaking.

The alternative would be to allow the Great Northern Railway to continue working more or less along existing lines, but with a statutory obligation to co-ordinate and pool its traffic with that of the new public undertaking. This, in the opinion of the Great Northern executives, is probably the more likely arrangement.

If the Government should decide to adhere to its original intention to complete a merger it would be open to the G.N.R., under the Eire Act of 1944, to transfer the southern portion of its system to Coras Iompair Eireann, which now controls the former Great Southern Railways. The Eire Act gives power to the C.I.E. to acquire any other railway in the country, but only with the consent of the railway concerned.

In Ulster, harbours and docks will remain in the hands of the present owners, nor is it intended to interfere with the Sligo, Leitrim & Northern Counties Railway or the Londonderry & Lough Swilly Railway, which have their headquarters in Northern Ireland but operate mainly in Eire.

The Place of Films in Railway Work

Mr. M. R. Bonavia, Assistant Secretary (Development & Works), British Transport Commission, gave a talk entitled "The Place of Films in Railway Work" to the Railway Students' Association (London School of Economics & Political Science) on December 17. The chair was taken by Mr. C. P. Hopkins, Chief Regional Officer, North Eastern Region, Railway Executive.

Of the four railway films exhibited in the course of Mr. Bonavia's talk, three had not been shown in public before, having been completed recently for the L.N.E.R. These dealt with the secure loading of wagons and road vehicles; the fundamentals of absolute block signalling; and railway staff relations with the public. The fourth film "Passenger Station Working" was produced before the war by the L.M.S.R. Film Unit.

Mr. Bonavia discussed the rapid development of instructional films during the recent war, many of which achieved substantial commercial success. Since the end of the war, industrial sponsorship of films had revived greatly, and the documentary had become an essential part both of publicity and staff educational methods.

He thought that the G.W.R. had been among the first in the field with the centenary film made in 1935, but thereafter that railway did not take as much interest in the matter as some of the other companies. Soon afterwards the L.M.S.R. took up films very seriously, and established its own film unit. This company wrote its own scripts, produced, directed and photographed the films, and used professional services only for laboratory work and sound recording.

The Southern Railway was close behind, also, with its own film unit. Last in the field was the L.N.E.R., which after very careful consideration decided on full professional production, because the conveying of information or entertainment by means of the film was a highly technical and specialised field. Mr. Bonavia recalled that the L.M.S.R. also had decided to discontinue its full-time film unit, and to adopt professional production for new films.

Dealing with the distribution of films, Mr. Bonavia said that broadly speaking the main scope for railway films lay outside the commercial cinema. On the L.N.E.R. it had been proposed to arrange film shows at selected railway centres. In some places halls would be hired, while at others suitable accommodation was available on railway property. The general idea was to build up a programme lasting, perhaps, 1½ hr., consisting of several short films and at least one L.N.E.R. instructional film. The programme was intended definitely to have entertainment value, and the staff would be invited to come and bring their families. Mr. Bonavia selected the films he showed from two types, the direct instructional, and the general interest film with an indirect instructional purpose. The L.N.E.R. film on public relations came in the second category. Its subject, that of courtesy, required very delicate handling if the wrong type of reaction among the audience was to be avoided. This film had been made deliberately with an eye to entertainment value even at the risk of not driving home the lesson too obviously.

A variety of views on the best approach to instruction through the cinema was expressed in the discussion which followed, and the proposal was made that a questionnaire should be circulated among members of the association so that all might play a part in expressing their opinion on this important subject.

Questions in Parliament

Minor Railway's Future

Major R. H. Turton (Thirsk & Malton—C.) on December 15 asked the Minister of Transport whether he had any statement to make on the future of the Easingwold & Alne Railway Company.

Mr. Alfred Barnes (Minister of Transport) stated in a written answer: No. This is a problem to which I have little doubt early consideration will be given by the British Transport Commission.

Retiring Age of Engine Drivers

Squadron-Leader M. C. Hollis (Devizes—C.) on December 15 asked the Minister of Transport whether, in view of the manpower shortage on the railways, the age for compulsory retirement of locomotive engine drivers could be generally raised to 65.

Mr. Alfred Barnes stated in a written answer: The retiring age is 65, except on the Great Western Railway, where it is 60 under an agreement entered into to meet the wishes of the men expressed through their elected representatives. I am bringing this matter to the attention of the British Transport Commission.

Steel Mineral Wagons

Lt.-Colonel Granville Sharp (Spen Valley—Lab.) on December 18 asked the Minister of Transport what was the additional cost and weight of the 16-ton steel mineral wagon caused by the provision of top flap door now required by his department; and why that was now deemed essential.

Mr. Alfred Barnes, in a written answer, stated: The additional cost is £6 a wagon and the extra weight 1 cwt. The doors are being fitted at the request of the Chamber of Coal Traders in order to reduce strain on men engaged in unloading.

Staggered Hours

Mr. A. H. E. Molson (High Peak—C.) on December 18 asked the Minister of Transport whether, having regard to the need to increase textile production to honour clothing coupons, he would take steps to avoid the need for such a staggering of hours of work as was recommended by a circular issued by the Manchester Chamber of Commerce, of which he had been provided with a copy, which would reduce the hours of work without any corresponding increase of production.

Mr. L. J. Callaghan (Parliamentary Secretary, Ministry of Transport) stated in a written answer: The purpose of staggering hours of work is not to shorten them, but

to adjust them so that transport difficulties may be eased. It would be contrary to the intention of the arrangement if staggered hours resulted in reduced output.

North Staffordshire Transport Facilities

Mr. Ellis Smith (Stoke—Lab.) on December 15 asked the Minister of Transport what plans were being prepared to improve the transport facilities between North Staffs and other parts of the country, and in particular what action did he intend to take to improve transport between North Staffs, Manchester, Sheffield, Stafford and Birmingham.

Mr. Alfred Barnes, in a written answer, stated: Having regard to previous railway difficulties, services between the towns named are considered by the railway companies to be adequate for the traffic offering. It will be the duty of the British Transport Commission to see that transport facilities in the country as a whole are adequate and efficient.

Stationmasters' Rents

Mrs. Jean Mann (Coatbridge—Lab.) on December 15 asked the Minister of Transport if his attention had been directed to the demand for increased rent issued in Circular S. 2613 to stationmasters in Scotland on November 4, 1947, and how he justified that increase to railway servants, while other members of the community were protected from such demands by the Rent Restriction Acts.

Mr. Alfred Barnes, in a written answer, stated: The railway companies will increase stationmasters' rents only in circumstances in which increases would be permitted by the Rent Restriction Acts if those Acts applied. In effect, increases in rents will be made only in cases where local rates are increased or where alterations or improvements are carried out for which, under the Acts, an interest charge could properly be made.

HUNSLET SHUNTING LOCOMOTIVE FOR PERU.—A standard gauge 39-ton 0-6-0 tank locomotive for heavy shunting service on the Southern Railway of Peru has been delivered to the Peruvian Corporation by the Hunslet Engine Co. Ltd. The locomotive is fitted with a Weir feed pump and feedwater heater, and is being fitted with oil-burning equipment.

LARGER TURNTABLES AT LONDON MIDLAND REGION DEPOTS.—To enable larger locomotives to be turned, modern turntables of greater size are to be installed on the London Midland Region at Belle Vue (Manchester), Bournville (near Birmingham), and Llandovery (Carmarthenshire). At Belle Vue and Bournville the diameter of the new turntables will be 57 ft. each, and at Llandovery 65 ft.

TOOL DISPLAY BY A SHEFFIELD FIRM.—Among the exhibitors at the Gauge & Tool Exhibition, which will be held at the New Hall of the Royal Horticultural Society, Vincent Square, London, S.W.1, from January 26 to February 6, will be the Sheffield Twist Drill & Steel Co. Ltd., whose display will include a range of Dormer Brand tools. Normally, this firm carries in stock well over 3,000 different sizes and varieties of small tools, embracing the full range of metric size jobber drills from 0·35 mm. to 13 mm., inclusive, and advancing by 0·025 mm. to 1 mm., 0·05 mm. to 5 mm., and 0·1 mm. to 13 mm. Space limitations on the stand, however, will allow the display only of a few standard lines, which will include centre drills, lathe centres, counterborers, hollow mills, taper shank drills and reamers, and jobbers in fractional, metric, gauge, and letter sizes.

Notes and News

Executive Assistant Required.—An executive assistant is required in the office of the press and publications officer of London Transport Executive. See Official Notices on page 91.

Assistant Locomotive Superintendent Required.—An assistant locomotive superintendent is required by the Gold Coast Railways. Candidates, between 25 and 35 years of age, must have served an apprenticeship in a railway workshop or with a firm of locomotive builders and have had subsequent experience in a supervisory capacity in the workshops or running department of a railway. See Official Notices on page 91.

National Debt and Railway Capital.—A letter from Mr. R. Howard draws our attention to the following comment on a financial aspect of nationalisation from "Our Home Railways" by W. J. Gordon, published in 1910:—"Those who would nationalise our railways may be interested to note that the National Debt is just four times the amount of capital on the Midland Railway, which is but a seventh of the total capital of the 296 railway companies in these islands"

Vulcan Foundry and Robert Stephenson & Hawthorns.—The Vulcan Foundry Limited, locomotive builders, of Newton-le-Willows, Lancs., which since 1943 has held an interest in Robert Stephenson & Hawthorns Limited, locomotive builders, of Darlington and Newcastle, announces that its stock holding now exceeds one half of that company's equity capital, thus constituting Robert Stephenson & Hawthorns Limited a subsidiary company of the Vulcan Foundry Limited within the meaning of Section 127 of the Companies Act, 1929.

Bridge Widening Scheme at Corby.—A contract has been placed with the Butterley Co. Ltd., Ripley, Derbyshire, for widening and strengthening the bridge carrying Rockingham Road over the main Kettering—Nottingham line at Corby in the London Midland Region. This work, which will complete a major road widening scheme eliminating a bottle-neck outside the works of Stewarts and Lloyds Limited, involves the widening of the railway bridge from 25 ft. to 60 ft. to accommodate a 30-ft. roadway and two 15-ft. footpaths. The existing bridge, which comprises a three-span brick arch structure, will be strengthened with 125 tons of steel girders encased in concrete, and a reinforced concrete slab deck. Abutments and wing walls will be of mass concrete faced with brickwork.

Deferred Call-Up for Rail Workers.—Mr. L. J. Callaghan, Parliamentary Secretary to the Ministry of Transport, told a meeting of railway workers in Edinburgh on January 11 that call-up of footplate grades was to be deferred temporarily to relieve the manpower situation. The Ministry has since stated that this is a temporary measure to operate until March 31. Mr. Callaghan also said that recruitment for these grades, and of workers for maintenance and workshops, should have priority.

Combined Station for Oxford Proposal.—Approval was given by the Oxford City Council on January 5 to a recommendation from the Town Planning Committee for a combined station replacing the former separate G.W.R. and L.M.S.R. stations. The plan provides for six through platform lines and two outside running loops in the new combined station, together with two through goods lines and bay platforms. A bus centre is proposed on a site adjoining the new station, with which it will have covered communication.

Butler Machine Tool Co. Ltd.—At a board meeting of the company held on November 26, the directors recommended the payment of a dividend of 12½ per cent., less income tax at 9s. in the £, on the ordinary shares for the year ended September 30, 1947. The net profit of the company for the year is £21,478, including £1,538 excess profits tax recoverable, and after providing £7,150 for profits tax on the basis of the proposed distribution, and £22,249 for income tax on the profits of the year. The provision for income tax is made this year without taking credit for income tax to be deducted from the proposed dividends. The comparable figures

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R.H. & D.R. Locomotive on Show at Waterloo Station

Group at Waterloo Station after the unveiling of the Romney, Hythe & Dymchurch Railway locomotive "Dr. Syn"

Left to right; Capt. J. E. P. Howie, Chairman, R.H. & D.R., Mr. O. V. Bulleid, Chief Mechanical Engineer, Southern Region, Mr. R. M. T. Richards, Deputy Chief Regional Officer, Southern Region, Lt.-Colonel Sir Alan Mount, Chief Inspecting Officer, Railways, Ministry of Transport, and Major J. T. Holder, General Manager, R.H. & D.R.

for last year were: profit £31,773; after deducting income tax, £25,689.

Turner & Newall Limited.—The directors' report for the year ended September 30, 1947, shows a final profit of £4,049,086, as against £2,807,459 in the preceding year. After deducting depreciation, directors' fees, and provision for taxation, the net profit is £727,058. A final dividend of 11¼ per cent. is recommended on the ordinary stock, making 15 per cent. for the year. An allocation of £20,000 is proposed to the Turner & Newall Welfare Trust Limited, and of £200,000 to general reserve, after which the balance of £393,592 remaining to be carried forward compares with £382,573 brought in.

Winding up of L.M.S.R. Conversion Trust.—It was announced on January 7 by the trustees of the London Midland & Scottish Stock Conversion Trust, that they had decided that it "would be right to wind up the trust." Formerly the trust held £853,728 of L.M.S.R. ordinary stock, now represented by £251,849 of British Transport guaranteed stock, 1978-88. The trustees point out that the income from the transport stock cannot be sufficient to pay more than a nominal dividend on the trust's 4 per cent. preference stock, thus leaving no income for the 5 per cent. preferred and deferred stocks. Application is being made to the Court for permission to terminate the trust, and also for approval of each £137 10s. of transport stock, subject to payment of winding-up expenses, being divisible for distribution in the following proportions: to 4 per cent. preference stock, £80; to 5 per cent. preferred stock, £42 10s.; to deferred stock, £15.

Rail Transport of Paint.—A special type of vehicle, which is illustrated below, has been placed in service on the Western Region to expedite the conveyance of bulk supplies of paint and varnish from the Imperial Chemical Industries depot at Slough. When the project was first considered, I.C.I. already had available some mild-steel tanks, 4 ft. 6¼ in. by 5 ft. 9 in., and it was found possible to utilise these for rail transport by the addition of suitable support and lifting equipment. To supply the special rail vehicle required, therefore, an existing milk van was modified by removing the body and fitting the floor with cradles to engage with supporting feet on the tanks, and strengthening where necessary to carry the additional load. The six-wheel vehicle illustrated is 27 ft. 6 in. over headstocks, and is suitable for running in fast freight trains, thus enabling 2,000 gal. of paint or varnish to be conveyed in one consignment, with a considerable reduction in the manpower previously required for loading and unloading a similar quantity.

Sentinel (Shrewsbury) Preference Shares.—The directors of Metal Industries Limited have given notice to holders of Sentinel (Shrewsbury) preference shares that, having obtained more than nine-tenths of the preference issue, they intend to proceed to compulsory acquisition of the remainder under Section 155 of the Companies Act, 1929. Minority preference shareholders now have until January 2 in which to notify the Court of their opposition to the scheme.

Trans-Zambesia Railway Co. Ltd.—The working results for the year to December 31, 1946, showed gross receipts of £318,407, as against £279,753 in the preceding year. Working expenses, at £242,536, compared with £239,773 in 1945, leaving net receipts of £75,871, as against £39,980. Goods tonnage rose from 176,468 tons to 191,122 tons, and there was an increase in the number of passengers carried from 77,197 to 87,640. Passenger receipts were £53,782, an increase of £9,994. Goods traffic produced £244,634, as against £218,084 in the previous year.

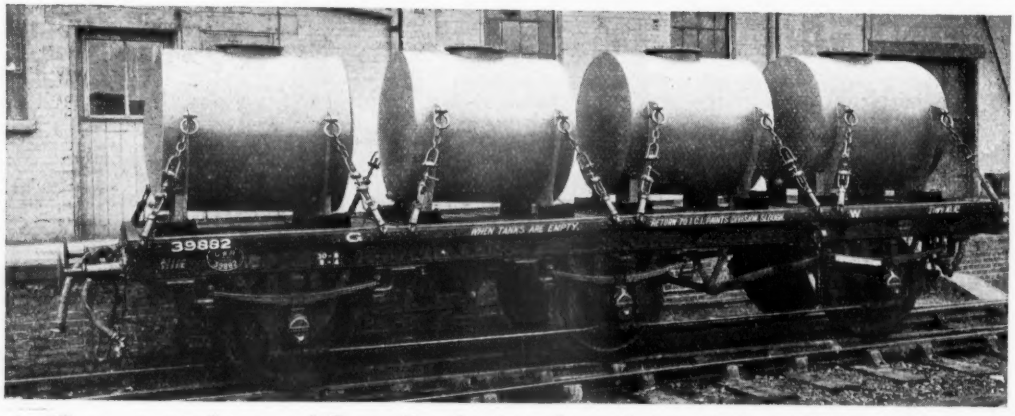
Central Wagon Co. Ltd.—Shareholders of the Central Wagon Co. Ltd. received a circular from the company pointing out that the fleet of wagons owned by the group would be taken over under the Transport Act on January 1, and that a claim for compensation was being prepared. The total amount of such compensation has not been established finally, but it will be considerably in excess of the written-down book value of the wagons. The company adjourned the meeting fixed for December 22, on account of unavoidable delays in completing the accounts for the year ended September 30 last.

Goswick Derailment Inquest.—The resumed inquest on 25 of the 28 persons killed in the derailment of an L.N.E.R. Edinburgh to London express at Goswick, near Berwick-on-Tweed, on October 26 (see our October 31 issue) was concluded on January 7. The jury found that the train was derailed because of "excessive speed as it passed through points." The verdict said that the excessive speed was a result of the engine driver not knowing of a diversion because he had not observed a notice displayed at Edinburgh; and of his negligence in not treating the distant signal, which was obscured by steam and smoke, as being at danger. It was found, also, that the fireman was negligent in not examining a notice board, and not ascertaining if it contained any instructions referring to the section of the track he was to proceed over. The signalman at Goswick, the verdict continued, made an error of judgment in lowering the home signal before he had ascertained adequately that the train was preparing to slow down. Evidence was given during the inquest by a naval leading stoker who had been riding on the footplate of the locomotive without official permission.

Leopoldina Debentures.—In accordance with the provisions of the scheme of arrangement dated December 23, 1946, it has been agreed to extend for one year, until January 1, 1949, the moratorium on the following stocks; Leopoldina Railway 4½ per cent. first debentures, and 6½ per cent. (formerly 5 per cent.) terminable debentures; and Leopoldina Terminal 5 per cent. first debentures to bearer. Notice is given also that the Terminal Debentures Committee of the Leopoldina Terminal Co. Ltd. has consented to the moratorium on the 5 per cent. first debentures being extended for one year until January 1, 1949, in accordance with the extraordinary resolution passed by holders of these debentures on February 19, 1947.

East Kent Road Car Co. Ltd.—The report for the year ended September 30, 1947, shows a profit, after providing for depreciation, taxation and other charges, of £260,995. To this total, traffic receipts and other revenue contributed £1,331,920. Adding the net balance brought forward of £25,775, there is an amount available of £286,770, out of which the directors have transferred £126,749 to general reserve. Out of the balance of £160,021, the directors recommend the following dividends: 6½ per cent., less income tax, on the cumulative preference shares; 15 per cent., less income tax, on the ordinary shares (on account of which 5 per cent. has been paid already); and a bonus of 10 per cent., less

Bulk Transport of Paint, Western Region



A milk van converted to carry bulk supplies of paint and varnish from the Imperial Chemical Industries depot at Slough (see paragraph on this page)

OFFICIAL NOTICES

None of the vacancies on this page relates to a man between the ages of 18 and 50, inclusive, or a woman between the ages of 18 and 40, inclusive, unless he, or she, is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

Agencies

A. M.I.MECH.E., M.I.Loco.E., Sound experience home and abroad, Industrial and Commercial, shortly proceeding Rhodesia and South Africa. Open to consider Agencies.—Box 234, *The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

REQUIRED to work in London. Civil Engineering Technical Assistants (Senior and Junior), experienced in design and able to undertake surveys and the preparation of detailed working drawings, calculations, estimates and specifications. Engagement on a temporary basis at a salary of up to £12 per week, according to qualifications and experience. Applications, stating age, experience, etc., with copies of recent testimonials, to Box 232, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

STEEL STRUCTURES purchased, dismantled and removed. Industrial steel structures re-built, re-roofed and renovated. Steel factory buildings dismantled, re-erected or adapted on other sites.—BELLMAN HANGARS LIMITED, Terminal House, Grosvenor Gardens, London, S.W.1. Sloane 5259.

THE RAILWAY HANDBOOK provides the railway student with a collection of useful statistics and information relating to the railways of Great Britain and Ireland. In addition, in matters of international interest, such as speed and electrification progress, the book extends its scope to cover the whole world in order to present a complete picture of these increasingly-important developments. 120 pp. Dy. 8vo. Paper covers. *Price 5s. By post 5s. 3d.*

His Majesty's Colonial Service

THE COLONIAL ENGINEERING SERVICE

A VACANCY exists for an Assistant Locomotive Superintendent, Gold Coast Railways. Qualifications required are Associate Membership of the Institution of Mechanical Engineers, or degrees or diplomas recognised by that body as granting exemption from Parts A and B of its examination. Candidates must be British subjects, physically fit, and between the ages of 25 and 35. They must have served an apprenticeship in a railway workshop or with a firm of locomotive builders and have had subsequent experience in a supervisory capacity in the workshops or running department of a railway. The appointed officer will be responsible to the Senior Locomotive Superintendent for the control of staff engaged in the maintenance, running and repair of locomotives, carriages and wagons, and for the maintenance and repair of cranes, tugs, launches, pumping plant and slipway.

Appointment will be on probation for permanent and pensionable employment within the incremental salary scale £510 to £1,000 (basic) per annum, point of entry depending on age, civil experience and length of approved war service. An expatriation allowance varying from £150 to £300 per annum is also payable. Terms of appointment include free medical attention, partly furnished government quarters, if available, at a rent of £60 to £90 per annum. Free passages once each way each tour for the officer and, if married, for his wife. An outfit allowance on first appointment if salary does not exceed £720 per annum (basic) and home leave on full pay after tours of approximately 18 months at the rate of 7 days for each month of resident service.

Intending candidates should write at once to the DIRECTOR OF RECRUITMENT (COLONIAL SERVICE), Colonial Office, 15, Victoria Street, London, S.W.1, stating age, professional qualifications, and brief details of experience.

LONDON TRANSPORT EXECUTIVE.—Applications are invited for an Executive Assistant post in the office of the Press and Publications Officer. Qualifications required are first-rate journalistic experience, interest in transport and industry, ability to collect facts and give a clear exposition of industrial, technical and engineering matters, accuracy, drive and organising ability. The post is a responsible one, offering considerable scope and interest to a keen young man prepared to overcome difficulties. Commencing salary £600-£700 per annum according to ability and experience. Only candidates with fully satisfactory experience and qualifications on the above lines should apply.

The successful candidate will be required to pass a medical examination and to serve satisfactorily a probationary period, upon completion of which membership of the staff contributory superannuation fund is compulsory. Canvassing, either directly or indirectly, will disqualify.

Applications, which should be typed, giving full particulars of education, business and other experience, present remuneration and age, should be sent within 14 days to the STAFF OFFICER (reference ER/E.465), LONDON TRANSPORT EXECUTIVE, 55, Broadway, S.W.1.

Specimens of work, which will be returned, should be forwarded with applications. For acknowledgment enclose addressed envelope.

RAILWAY SIGNALLING DRAUGHTSMAN, with good general and technical education, also knowledge of Railway Signalling, Engineering Theory and Practice. Applicants should apply in writing giving age, training, experience, and salary required, to THE RAILWAY SIGNAL CO. LTD., Fazakerley, Liverpool 9.

TRAFFIC CONTROL ON THE L.M.S.R. Co-ordination of operating arrangements as a result of grouping.—Central, Divisional, and District Control—Outline of unified methods adopted—Organisation and working—Control telephone circuits—Daily telephonic conferences. Paper. 12 in. by 9 in. 20 pp. Illustrated. *5s. By post 5s. 2d.*

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income tax, on the ordinary shares. The balance to be carried forward is £90,996.

Bulgarian "Youth Railway" Opened.—The opening of a new line forming a shorter route from Sofia to the Pernik coal mining region, 25 miles to the south-west, is reported by Reuters. The line has been built by volunteer labour from youth organisations and was completed before the target date.

Derailment near Didcot, Western Region.—The up and down relief lines of the Western Region at Appleford, near Didcot, were blocked in the evening of January 9, when the locomotive and 15 wagons of an empty goods train from Acton to Hereford were derailed. Trains normally using the Didcot to Oxford route were diverted by Maidenhead and High Wycombe, and were subject to delay. The derailment occurred at 7.25 p.m., and the 6.5 p.m. from Paddington to Wolverhampton was stopped at Didcot and taken back to Maidenhead.

Vickers-Armstrongs to Manufacture Sulzer Engines for Locomotives.—An agreement has been concluded between Vickers-Armstrongs Limited and Sulzer Bros. (London) Ltd. under which Vickers-Armstrongs will manufacture Sulzer engines for locomotive and other rail traction services at their Barrow-in-Furness works. All questions of sales and co-ordination of design of the complete vehicles will be handled by Sulzer Bros. (London) Ltd. The first engines to be built under this agreement will be fitted into six 1,830-b.h.p. express locomotives for the Dublin—Cork service of Coras Iompair Eireann.

Stockholm Underground Railway Representatives Visit London Transport.—The General Manager of the Stockholm Tramways Company, Mr. M. Helin, accompanied by the Chief Planning Engineer, Mr. Stig Samuelson, has visited London to discuss with London Transport tube experts technical details of an underground railway for Stockholm. Constructional work has begun on the line already. The railway will be 6½ miles long, of which 4 miles will be tunnel. There will be 14 stations, some of which will have escalators. The plans for the line were described in our October 24 issue.

Agreed Charges.—Applications for the approval of 140 further agreed charges under the provisions of section 37 of the Road & Rail Traffic Act, 1933, have been lodged with the Transport Tribunal. Notices of objection must be filed on or before January 23 next.

Railway Companies (Accounts & Returns) Orders.—The Minister of Transport on December 31, 1947, made the Railway Companies (Accounts & Returns) (No. 3) Order, 1947 (S.R. & O. 1947, No. 2856), and the Railway Companies (Accounts & Returns) (No. 4) Order, 1947 (S.R. & O. 1947 No. 2857).

Ministry of Transport Staff Party.—On Friday last a staff party was held at the Ministry of Transport which was attended by the Minister, Mr. Alfred Barnes and Mrs. Barnes, Mr. L. J. Callaghan, the Parliamentary Secretary, and all ranks of the staff of the Ministry. The entertainment included dancing and a cabaret.

Canals Inspection Tour.—Sir Reginald Hill, Chairman of the Docks & Inland Waterways Executive, made an inspection tour of canals in West London on January 6. He visited the Grand Union Canal headquarters at Ruislip and the Bulls Bridge Heston Depot of the Grand Union Canal Carrying Company, where he inspected the repair, repainting and fuelling of barges and the making and drying of barge tarpaulins. Later in the day he inspected Grand Union Canal maintenance and the Brent Meadow Wharf Depot warehouse and storage system at Brentford.

Second Gauge & Tool Exhibition in London.—As a result of the success of the exhibition held by the Gauge & Tool Makers' Association in London two years ago, it was decided to hold a further exhibition early in 1948. On this occasion, however, the display will represent a joint effort by the Association and the National Federation of Engineers' Tool Manufacturers, and the exhibition will be held in the New Hall of the Royal Horticultural Society, Vincent Square, London, S.W.1, from January 26 to February 8. The exhibition will be opened by the Rt. Hon. Oliver Lyttelton, D.S.O., M.C., Chairman of Associated Electrical Industries Limited and President of the Advertising Association. At a reception held at Claridges Hotel, London, on January 7, members of the Press were welcomed by Mr. F. W. Halliwell, President of the Gauge & Tool Makers' Association, and Mr. S. W. Rawson, Vice-President of the National

Vesting of Railways

TRANSPORT ACT 1947

GREAT WESTERN RAILWAY COMPANY
LONDON MIDLAND & SCOTTISH RAILWAY COMPANY
LONDON & NORTH EASTERN RAILWAY COMPANY
SOUTHERN RAILWAY COMPANY
LONDON PASSENGER TRANSPORT BOARD

Notice is hereby given that in pursuance of the above Act the Undertakings of the above named bodies vest in the British Transport Commission on 1st January, 1948, and that on and after the said date all Byelaws, Regulations and Notices published by any of the said bodies and in operation immediately before the said date and all tickets, consignment notes and other documents issued or used on and after the said date and which bear the name of any of the said bodies shall be deemed to be published and issued by and in the name of the Railway Executive or the London Transport Executive (as the case may be) constituted under the said Act.

BY ORDER

31st December, 1947

Notice issued by British Transport Commission

Federation of Engineers' Tool Manufacturers, and among the guests were Sir Frederick Bain, President of the Federation of British Industries, and Sir Patrick Hannon, President of the National Union of Manufacturers.

Thurgoland Tunnel Bore Pierced.—On January 9 the constructional parties working on the bore of the new railway tunnel at Thurgoland, near Penistone, on the Manchester—Sheffield main line of the Eastern Region, made contact with each other. Work on driving the tunnel began some months ago, and was described in our April 11, 1947, issue. The new bore, which is being provided in connection with the electrification scheme, will carry one of the tracks in the present double-track tunnel.

Forthcoming Events

January 19 (*Mon.*).—The Institute of Transport at the Institution of Electrical Engineers, Savoy Place, London, W.C.2, at 5.30 p.m. "Living with Transport—a Survey of Amenity Requirements in a Public Transport Service" by Mr. C. Barman and Mr. M. G. Bennett.

January 21 (*Wed.*).—The Permanent Way Institution. Denison House, Vauxhall Bridge Road, S.W.1, at 6.30 p.m. "Management at the Work Level," by Mr. D. H. Coombe, B.Sc.(Econ.), A.M.I.C.E.

January 23 (*Fri.*).—The Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.1, at 5.30 p.m. "Gas Turbine and Marine Propulsion" by Mr. T. A. Crowe, M.Sc., M.I.Mech.E. (Member of Council).

Railway Stock Market

Strength of British Funds, contrasting with a reaction in industrial shares, on fears of another increase in the price of coal, has featured stock markets. There was a good turnover in the gilt-edged market, with a general rise in values in response to the uptrend in 3 per cent. Transport (1978-88), which in active dealings has risen to 98⅞ at time of writing. A feature has been provided by the 3 per cent. Transport stock (1967-72), dealings up to 100 having been recorded (a rise of 3 on balance).

An outstanding market feature has been a spectacular advance in road transport shares after the news of Thomas Tilling's negotiations and Transport Services' deal with the British Transport Commission. The marking up of road transport shares included shares of companies which are not negotiating with the Transport Commission and which are unlikely to follow this course. British Electric Traction stock, for instance, was advanced no less than £165 to £1,750 on Monday. Thomas Tilling have risen 9s. 3d. to 87s. 6d., and Transport Services' 5s. shares, which in recent weeks have been a steadily rising market, rose afresh to 31s. 6d.

The big rise in values is based on the fact that, with few exceptions, current market prices are below "break-up" values as estimated on the last balance-sheet figures. It is realised that there has so far been no indication of the compensation basis arising from negotiations with the British Transport Commission.

After the winding-up decision, L.M.S. Stock Conversion 5 per cent. preference has changed hands up to 15¾, the 4 per cent. preference up to 17¼, and the deferred at 1¾. There was little stock about at these levels, which are below market estimates of the break-up value of each class of stock. Central London Guaranteed stock held its recent advance, dealings being recorded at 95¾. Dealings in Metropolitan Assented ranged up to 59¼.

There was again only moderate activity in foreign railway stocks, and Argentine rails were unaffected by reports that better progress is expected in the Anglo-Argentine trade talks, the conclusion of which apparently must be awaited before the Argentine ratifies the railway agreement. Apart from some activity in Leopoldina stocks, Brazil rails were unaffected by the belief that an economic and financial mission shortly will leave for Brazil. Leopoldina was 13½, with the 5½ per cent. preference 37¼, and the 4 per cent. debentures 62. San Paulo, however, eased to 154. In other directions there was demand for Antofagasta, the ordinary improving to 11¼ and the preference stock to 62. United of Havana 1906 debentures have been steady at 15. Canadian Pacifics eased to 18½, awaiting news of the decision regarding higher rail charges; the preference stock changed hands around 75 and the 4 per cent. debentures were 111¼. After an earlier rise, Beira Railway bearer shares eased to 52s. 6d.

News of the new steel allocations helped shares of locomotive building and engineering companies. North British Locomotive were 28s. 9d., Beyer Peacock 26s., and Vulcan Foundry 34s. 3d. Charles Roberts were £7¾. Elsewhere, Pullman Car "A" shares have risen further to 22s. 6d. on rumours that the ban on foreign travel may be relaxed.

Traffic Table and Stock Prices of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffic for week: Total this year	Traffic for week: Inc. or dec. compared with 1945/46	No. of Week	Aggregate traffics to date: Totals 1946/7	Aggregate traffics to date: Totals 1945/6	Aggregate traffics to date: Increase or decrease	Shares or Stock.	Prices: Highest 1947	Prices: Lowest 1947	Prices: Jan. 13 1948
				£	£		£	£	£				
South & Central America	Antofagasta	834	4.1.48	40,530	+ 9,360	1	40.530	31.170	+ 9,360	Ord. Stk.	17	9½	10¼
	Arg. N.E.	753	27.12.47	ps.352,600	+ps.65,800	26	ps.8,814,100	ps.8,209,000	+ ps.605,100	,,	21	10	10
	Bolivar	174	Dec., 1947	$98,426	— $2,866	52	$1,260,009	$1,303,976	— $43,967	6 p.c. Deb.	25	16½	25
	Brazil	—	—	—	—	—	—	—	—	Bonds	44½	26	42
	B.A. Pacific	2,771	3.1.48	ps.3,040,000	+ps1,078,000	27	ps.69,041,000	ps.60,156,000	+ ps.8,885,000	Ord. Stk.	11½	6	11
	B.A.G.S.	5,080	3.1.48	ps.4,058,000	+ps.522,000	27	ps.93,721,000	ps.90,546,000	+ ps.3,175,000	Ord. Stk.	19	12	17
	B.A. Western	1,924	3.1.48	ps.1,420,000	+ps.170,000	27	ps.38,253,000	ps.33,521,000	+ ps.4,732,000	,,	28½	14½	22
	Cent. Argentine	3,700	3.1.48	ps.3,325,000	+ps.13,640	27	ps.90,714,871	ps.85,151,757	+ ps.5,563,114	,,	21	9	18
	Do.	—	—	—	—	—	—	—	—	Dfd.	21	5	12½
	Cent. Uruguay	970	3.1.48	43,423	+ 9,368	27	879,458	987,431	— 107,973	Ord. Stk.	30½	9½	23
	Costa Rica	262	Nov., 1947	34,296	+ 13766	22	162.347	132.743	+ 29.604	Stk.	13	8½	8
	Dorada	70	Oct., 1947	26.800	— 3.300	44	300.900	309.975	— 9.075	1 Mt. Deb.	108	100½	106½
	Entre Rios	808	27.12.47	ps.463.600	+ps.46.700	26	ps.11,499,400	11,106,600	+ ps.392.800	Ord. Stk.	11	6½	11
	G.W. of Brazil	1,030	3.1.48	14.800	— 3,800	1	14.800	ps.18.600*	— 3.800	Ord. Stk.	102 6	19/—	3¼
	Inter. Ctl. Amer.	794	Nov., 1947	$1,050,472	+$217,110	48	$11,953,437	$9,543,915	+ $2,409,522	—	—	—	—
	La Guaira	22¾	Dec., 1947	$89,178	— $17,932	52	$1,254,425	$1,393,471	— $139,046	5 p.c. Deb.	88½	65	84½
	Leopoldina	1,918	3.1.48	57,969	— 15.741	1	21.346	27.537	— 6.191	Ord. Stk.	22½	3¼	14
	Mexican	483	31.5.47	ps.1,464,000	+ps.459,100	22	ps.7,706,200	ps.13,441,600	+ ps.5,220,000	Ord. Stk.	8	¼	1
	Midland Uruguay	319	Nov., 1947	16.340	+ 164	22	85.275	96.760	— 11.485	—	—	—	—
	Nitrate	382	31.11.47	10,431	— 167	52	228.618	212.575	+ 16.043	Ord. Sh.	86/3	62/6	65/—
	N.W. of Uruguay	113	Nov., 1947	5,425	+ 57	22	25.863	28.279	— 2,416	—	—	—	—
	Paraguay Cent.	274	2.1.48	£63,898	— £ 3,958	27	£1,647,795	£1,701,846	— £54,051	Pr.Li.Stk.	60½	44½	52½
	Peru Corp.	1,059	Dec., 1947	184.411	+ 37,258	26	1,026,119	920.202	+ 105.917	Pref.	13	7	7¾
	Salvador	100	31.10.47	c80,600	+ c7,600	17	c315,600	c322,000	— c6,400	—	—	—	—
	San Paulo	153¼	—	—	—	—	—	—	—	Ord. Stk.	189½	129½	155½
	Taltal	156	Dec., 1947	8,390	+ 4,710	26	40,740	29 410	+ 11.330	Ord. Sh.	24/—	17/—	18/9
	United of Havana	1,301	3.1.48	53.910	+ 3,835	27	1,581.877	1,328.748	+ 253.129	Ord. Stk.	4½	1½	1½
	Uruguay Northern	73	Nov., 1947	889	— 557	22	5,406	6,706	— 1,300	—	—	—	—
Canada	Canadian National	23,535	Nov., 1947	9.373.250	+ 91.250	48	99.924.750	91.193.750	+ 8,731,000	—	—	—	—
	Canadian Pacific	17,037	Nov., 1947	6.808,750	+ 242.750	48	72,495,250	66,887,000	+ 5,608.250	Ord. Stk.	18⅜	16	18
Various	Barsi Light†	202	Nov., 1947	31.402	+ 8.700	35	205.350	184.770	+ 20.580	Ord. Stk.	114½	100½	103½
	Beira	204	Oct., 1947	116,016	+ 21.525	4	116.016	90.491	+ 21.525	—	—	—	—
	Egyptian Delta	607	30.11.47	15.840	— 8,474	39	380.158	443,463	— 63.305	Prf. Sh.	6½	6	6
	Manila	—	—	—	—	—	—	—	—	B. Deb.	83½	69	83½
	Mid. of W. Australia	277	Oct., 1947	19.914	— 920	17	78.882	69.457	+ 9.425	Inc. Deb.	75	65	74½
	Nigeria	1,900	Sept. 1947	349,839	— 6.103	26	2,086.405	2,251.155	— 164,750	—	—	—	—
	Rhodesia	2,445	Sept., 1947	643.980	+ 102.833	52	6.787.603	6.174.664	+ 612.939	—	—	—	—
	South African	13,323	13.12.47	1,358.236	+ 65.551	37	46,472,692	42,294,682	+ 4,178,010	—	—	—	—
	Victoria	4,774	Aug., 1947	1,177.321	— 11.568	9	—	—	—	—	—	—	—

* Receipts for 4 days in 1947 † Receipts are calculated @ 1s. 6d. to the rupee